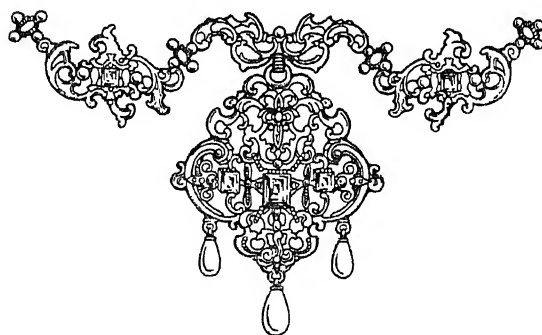

THE ROMANCE OF THE JEWEL

THE ROMANCE OF THE JEWEL

BY

FRANCIS STOPFORD



LONDON

PRINTED FOR PRIVATE CIRCULATION, AND PUBLISHED AT
158-162, OXFORD STREET, IN THE COUNTY OF LONDON

MXMXX

RAMAN RESEARCH INSTITUTE
BANGALORE 6

Class No.

Acc. No. 6685

Foreword



WITH the opening of branches in all parts of the world, we have been deeply impressed by the universal interest that is taken in the Story of Jewels and of Precious Stones. They are regarded not only for their intrinsic beauty and value, but also as representing one of the oldest fine arts in the world. Time and again we have been consulted as to where the full story of some gem may be read. We have felt impelled to prepare "The Romance of the Jewel" and to present it in a manner worthy of the subject in order to please this perfectly natural curiosity.

This is how this book came to be written. We have been fortunate in enlisting the interest of Mr. H. Clifford Smith, of the Victoria and Albert Museum, the well-known author of "Jewellery." Mr. Clifford Smith has made a careful revision of the proofs, and has helped with advice and in other ways, especially in the matter of the illustrations ; and we would take this opportunity to offer our grateful thanks to the owners of the jewels here illustrated who have placed their precious possessions at his disposal for this purpose. No attempt is made in these pages to go into the more mechanical or commercial side of gems or gem setting. It is with the singular Romance of the Jewel, which is often fascinating and attractive as the jewel itself, that they are almost entirely concerned.

Contents

CHAPTER	PAGE
I. THE ART OF THE JEWELLER - - - - -	I
II. THE DIAMOND - - - - -	11
III. DIAMONDS, LEGENDARY AND HISTORICAL - - -	22
IV. THE PEARL - - - - -	36
V. THE RUBY - - - - -	50
VI. EMERALD - - - - -	61
VII. SAPPHIRE - - - - -	67
VIII. AMETHYST—TOPAZ—TURQUOISE - - -	72
IX. OPAL—MOONSTONE—CAT'S-EYE—PERIDOT - -	84
X. ON RINGS - - - - -	92

List of Illustrations

PLATE		PAGE
I.	PENDANT JEWEL OF THE RENAISSANCE - - - - -	<i>opposite</i> 4
II.	INDIAN JEWELS DECORATED WITH ENAMEL - - - - -	6
III.	ORNAMENTAL RINGS OF THE RENAISSANCE - - - - -	16
IV.	THE CULLINAN DIAMOND - - - - -	18
V.	THE EMPRESS JOSEPHINE'S NECKLACE - - - - -	32
VI.	THE EGLINTON BLACK PEARLS - - - - -	36
VII.	A VENETIAN PENDANT - - - - -	40
VIII.	A PAIR OF PERSIAN EAR-RINGS - - - - -	42
IX.	TIARA AND ORNAMENT OF BLACK PEARLS - - - - -	44
X.	THE RED-CROSS PEARL NECKLACE - - - - -	48
XI.	JEWELS FROM THE TREASURY OF THE MOGUL EMPERORS AT DELHI - - - - -	50
XII.	INDIAN JEWELS OF JADE SET WITH PRECIOUS STONES	56
XIII.	OLD CARVED INDIAN EMERALDS - - - - -	62
XIV.	NECKLACE WITH JEWELLED CLASPS - - - - -	64
XV.	ENAMELLED GOLD NECKLACE - - - - -	68
XVI.	AN AMETHYST PARURE - - - - -	72
XVII.	A PARURE OF PINK TOPAZ - - - - -	76
XVIII.	TURQUOISE EAR-RINGS FROM THIBET - - - - -	80
XIX.	FIRE OPALS - - - - -	84
XX.	A CHRYSOPRASE PARURE - - - - -	88
XXI.	LOVE RINGS - - - - -	90
XXII.	PAPAL RINGS - - - - -	94

CHAPTER I

The Art of the Jeweller

*A thing of beauty is a joy forever :
Its loveliness increases ; it will never
Pass into nothingness.*



THE word Jewel is significant. It means a "thing of joy."—a little joy—the diminutive of the French word *joie*. It was applied to precious stones and precious metals because they have been used from the earliest stages of civilisation to commemorate and signalise human joy. Presently we shall show, in the chapters relating to precious stones, how large a part jewels have always played in the worship and adoration of the divine ; how some of the most famous gems in history originally shone as the adornment of the images of deities, and how they were robbed by conquering captains of alien faith and used by them as a symbol of their pre-eminence among mortal men.

The jeweller's craft is one of the oldest practised by man, and, through its profoundly human significance, it was brought to a higher pitch of excellence at an earlier period than any other art. It has persisted through the generations, and the museums of all civilised nations bear testimony to-day that the shining phrase of John Keats, cited at the head of this chapter, has no truer application than when the thing of beauty is a jewel. "Its loveliness increases ; it will never pass into nothingness."

To search the veins of the earth and the caves of the sea for fitting symbols of joyfulness of heart seemed in ancient days as natural as to obtain sustenance by the cultivation of the ground. A famous passage in the Book of Job sonorously proclaims this truth : "As for the earth, out of it cometh bread, and under it is

turned up as it were fire. The stones of it are the place of sapphires, and it hath dust of gold." It was held to be as lawful for man to deck himself with sapphires and "dust of gold" as to eat bread.

A goldsmith or jeweller has been defined by a modern writer as a man who has studied for a number of years under a master of his craft; has learnt its technical processes and acquired a knowledge of those higher branches of the trade which have raised it into an art; and has also gained a sufficient knowledge of scientific chemistry and metallurgy to be thoroughly acquainted with the properties of the precious stones and precious metals in which he works. If to this be added a natural aptitude for draughtsmanship and correct feeling, we have an artist whose work should compare favourably with the most famous jewels of the past.

People made themselves fine with jewels thousands of years ago, probably before they had woven stuffs to cover them. In the Book of Genesis we find that the servant of Abraham who was sent into Mesopotamia to find a wife of Abraham's tribe for Isaac, gave to Rebekah "a golden earring of half a shekel weight, also two bracelets for her hands of ten shekels weight," and after the betrothal was made, presented to her "jewels of silver and jewels of gold." Pharaoh wore a ring upon his hand which he took off and put upon Joseph's hand, and he also put a gold chain about his neck. And if we turn to the sacred writings of other religions we find the same references to jewels as marks of love, honour or adoration.

Which was the first precious stone that fascinated man? Possibly the pearl, in that its beauty was at once manifest when the mollusc was opened, for it needed neither to be cut nor polished, and its discovery was probably incidental to search for food. Gold—alluvial gold washed from the sands of rivers—was used from earliest times. Its colour, weight and malleability were all in its favour, and the hammer of the goldsmith must have sounded in the dim dawn of the human race. Gold ornaments wrought nearly 3000 years ago have been discovered in Egyptian tombs, and of workmanship so good as to put much modern work to shame. The sacred scarabæus or beetle, in the eyes of the old Egyptians the emblem of eternal regeneration, has been found frequently in golden models. The Etruscans, too, showed great skill in metal-working, as their elaborate necklaces and other ornaments clearly demonstrate. These people were of Oriental origin, and came from Lydia, bringing with them traditions of taste and luxury. They were accompanied by goldsmiths chosen for the

fineness and delicacy of their work, and especially for the perfection of their chasing. Etruscan jewellery equalled the finest examples of Greek art in this respect. Beautiful necklaces are still in existence, with five pendants, in which bosses of gold alternate with little vases without handles, exquisitely wrought, the work of Etruscan hands.

The Romans were influenced in the jeweller's art by the Greeks and Etruscans, and Greek artists were invited to Rome, where they were the fashionable artificers of golden brooches, necklaces, bracelets, and earrings for ordinary wear, and also of more elaborate objects, studded with precious stones.

It is not surprising that the Byzantines loved jewellery ; Oriental influence is plainly seen in those specimens which still remain, and which are often remarkable for the uncut gems with which the different adornments are studded. Quantities of wonderful jewels are said to have been accumulated by the Emperor Justinian and his successors in the Church of St. Sophia, and in the palace of which it formed a part. Charlemagne gave encouragement to Byzantine jewellers and goldsmiths, and his will is a proof of the treasures which he possessed. His crown and sword have been preserved, and are in the Imperial Treasury at Vienna. The former is composed of eight plates of gold, four larger than the others, joined together by hinges. The larger pieces are studded with different gems, while the smaller are enamelled with figures and inscriptions. The scabbard of the sword is entirely covered with gold, and ornamented with designs in cloisonné enamel of a very beautiful pattern.

The dwellers in these islands, from time immemorial, were fond of bedecking themselves, and many things have been gradually unearthed which prove that some of their ornaments were of admirable craftsmanship. Britons and Anglo-Saxons alike wore necklaces of beads, made of glass and stones of different colours—sometimes the beads were of gold and silver. Amethysts set in gold and hanging from a band have been found, a filigree cross or a gold coin being often suspended from their necklaces. Others were made of amber beads. The belts and girdles of the Anglo-Saxons were ornamented very elaborately. Not only were the buckles by which they were fastened of the richest workmanship and of large size, but they were sometimes enriched with plates of gold beautifully chased and set with precious stones and fresh-water pearls.

Alfred the Great, when he was king of England, handsomely encouraged the art of the goldsmith. His celebrated jewel found at

Athelney in Somersetshire, where he took refuge from his enemies in 878, is preserved in the Ashmolean Museum at Oxford. It is made of gold, and ornamented with filigree work and engraving. It is oval in shape, and in the centre there is a representation of a human figure in cloisonné enamel covered with a piece of rock-crystal a quarter of an inch in thickness. Round the edge are these words: AELFRED MEC HEHT GEWYRCAN ("Alfred ordered me to be made").

Many jewels have been found at different times in Ireland, which had an incomparable art of its own. One of the best known is the Royal Brooch of Tara, discovered near Drogheda. There are said to be seventy-six varieties of the so-called Celtic brooch, all of which show admirable workmanship and beautiful designs. The Brooch of Lorne is another jewel probably of the same period as the Brooch of Tara, but peculiar to Scotland. Finger rings, both of Roman and Anglo-Saxon workmanship, are sometimes found in this country; Saxon jewellers used to set Roman intaglios in gold rings, for they were greatly valued as charms or amulets.

In the fourteenth and fifteenth centuries the jeweller was always a skilled artist, and in Italy, where this art at that time especially flourished, many of the great painters had the beginning of their training in jewellers' workshops. Francia was a goldsmith at Bologna, and he often signed his pictures in later life "Francia the Goldsmith." Ghirlandajo, the master of Michael Angelo, was a goldsmith; also Verrocchio, famous as the teacher of Leonardo da Vinci. Ghiberti, again, was the stepson of a goldsmith, and by the training he received in his father's workshop he was able not only to design but also to cast the celebrated gates of the Baptistery at Florence, which Michael Angelo declared were fit to be the gates of Paradise.

Then came the Cinquecento, the dazzling period that followed on the year 1500, the year which saw the birth of that strange and *farouche* genius, Benvenuto Cellini. He raised the jeweller's art to its highest perfection, and his influence still imposes itself on the modern craftsman. Of Cellini, his contemporary Vasari wrote in these handsome terms: "Cellini, a Florentine citizen, now a sculptor, had no equal in the goldsmith's art when devoting himself to it in his youth, and was perhaps for many years without a rival. He mounted precious stones so skilfully, and decked them in such marvellous settings with small figures, so perfect and sometimes so original, and with such fanciful state, that one could not imagine anything better. He also mounted with rare talent a diamond, cut to a point, and

PENDANT JEWEL

In the form of a Triton or Merman. Enamelled gold, set with rubies and diamonds.

The body of the figure is composed of a large baroque pearl; the head and arms are of white, and the tail of yellow, green and blue enamel.

Said to have been given by a Medici prince to one of the Mogul Emperors of India. Purchased in India by Earl Canning when Governor-General. From him it descended to the last Marquess of Clanricarde, who bequeathed it to the present owner.

This pendant, the work of one of the great Italian craftsmen of the Cinquecento, is perhaps the finest example of Renaissance jewellery extant.







surrounded by several young children carved in gold." Like many of the great Italians, Cellini was in request in foreign countries, and his stay in France, in the reign of Francis I., was productive of magnificent works of art. But Italy called him, and on his returning to Florence, the great connoisseur, Duke Cosmo de Medici, employed Cellini liberally in executing works in jewellery and sculpture.

Another great artist, in this case a German, was the son of a goldsmith. Albert Dürer laid the foundation of his amazing technique by learning his father's trade. Technically the art of engraving was a development of the art of the goldsmith or metal-chaser. Between the art of the goldsmith and the art of the painter there had always been a close alliance, both being habitually exercised by persons of the same family and sometimes by one and the same person.

While in the fifteenth and sixteenth centuries the goldsmith and jeweller was the parent of the painter, sculptor and engraver, in the seventeenth century he was, in England, to father the business of banking, for the goldsmith was the first banker in this realm. From no other craft or trade have proceeded such splendid offspring. Well may the goldsmith boast that he stands at the very head of retail trade, and that he is the premier among craftsmen and tradesmen.

London also has pride of place in this respect. The fine work of her goldsmiths and silversmiths has been famous for centuries. Many of the earlier masterpieces were lost at the time of the Great Rebellion, when jewels were broken up and plate melted down to provide King Charles with money; but what has survived compares favourably with the workmanship of the Italian and French schools. The gem-work of the jewellers of London also won a high reputation for sterling worth and artistic merit generations ago—a reputation which is still maintained. Tyre at her zenith was not so great a mart for precious stones as is London of the twentieth century. There is something at once regal and fantastic in this prodigious tribute of dazzling stones. Into the lap of London are poured diamonds from the mines of Asia, America and Africa; all the pearls of the Orient are spread before her; offerings of ruby, emerald and sapphire are lavishly made; the opal shows the first flashes of its fire in her jewellers' parlours; topaz from the mines of the Pharaohs, turquoises from the pits which Isaac Ben-Abram digged are presented willingly to her. If all the jewels and gems that yearly

come to our capital from the mountains, rivers and seas of the world were to be fashioned into a throne, the Peacock Throne of Shah Jehan would be a dull and humble chair of honour beside the dazzling splendour of such a rainbow seat of dignity.

Delicate jewellery has been fashioned in India from remote ages, and, except in modern times, where European influence and taste have been brought, somewhat disastrously, to bear upon native art, the style and decoration of Indian jewellery have remained unchanged for centuries. The ornaments consist of chains, anklets, bracelets, armlets, rings for the nose, and adornments for the head, which hang over the forehead, most elaborately worked in gold and silver and studded with uncut precious stones. Very little of the precious metals is used for the effect obtained, so that the intrinsic value of the work when completed is small in comparison with that of the jeweller's skill in workmanship.

An interesting description of the manner in which the Indian goldsmith works is contained in Burty's book on the Industrial Arts published fifty years ago. This system was in vogue until quite recent times, in fact it still probably persists in the more backward districts, and it is common not only to India but throughout the East. It shows how in the East the art of jeweller has been one with the art of painter and sculptor, and also one might add with the art of weaver and embroiderer. Burty writes :

"We have seen on the neck and arms of a young girl who had been brought up in India necklaces and bracelets of a degree of thinness and suppleness which defied all comparison with our European workmanship. They were actually as fine and supple as a thread of silk ; and yet not a single one of these threads, in themselves so fine as hardly to be discernible with the naked eye, had given way in the twenty years that she had had them in her possession. She told us how that every year, at a certain season, four poor itinerant goldsmiths came and established themselves in a little tent by the roadside opposite her father's house. They came in, and a few ounces of gold were measured out and given to them ; then they fixed a small anvil into the ground, squatted on their carpets, and from morning to night they would hammer, chisel and beat with a surprising degree of patience, ability and taste. A handful of rice was given to them every morning, and about a fortnight later they came back and returned the equivalent amount of gold to that which had been given them transformed into trinkets

INDIAN JEWELS DECORATED WITH JAIPUR ENAMEL

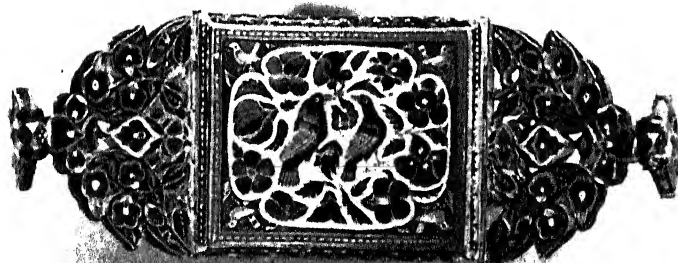
Pendant of a pearl and emerald-bead Necklace ; soft, pure gold, enamelled in translucent red and green and opaque white enamel ; with pearl drop. The front of the pendant is jewelled with rubies, diamonds and emeralds. Eighteenth century Mogul work from Delhi.

Back of gold Armlet (*Bazuband*), enamelled in translucent red and green, and opaque white and lavender colour. The front of the ornament is jewelled with thirteen large cabochon and cut gems and a number of smaller stones (lasque diamonds, etc.). Jaipur, Rajputana.

Gold pendant Charms (*Latkan*), purchased and worn by wealthy pilgrims to the famous Vaishnavite shrine at Nāthdwāra, in the State of Udaipur, Rajputana.

Enamelled in translucent red, green and blue, and opaque white colours ; with emerald drop.

Enamelled in translucent red and opaque white, lavender coloured, and yellowish-white colours ; with green enamelled drop. (The foot-prints represent those of Krishna.)



and chains so light that Queen Mab might have selected them to harness her butterflies to her chariot. After which, with stoical indifference, they would fold up their tent, remove a few leagues off, and establish themselves at the door of some other nabob."

Jewels link the present with the past in a marvellous fashion. There are necklaces, brooches, bracelets, earrings and even hairpins in existence which are believed to have been worn by the women of Troy, and may conceivably have enhanced the beauty of Helen herself. These ornaments were unearthed at Hissarlik, popularly regarded as the site of old Troy; they were taken from what was known as the Treasury of Priam, which no doubt was originally a burying ground, and the reason for their survival is due to their choice for the adorning of the dead. All that was mortal of the men and women, on whose bodies these lifeless stones and bits of metal were placed by loving and reverent hands, has long since resolved into dust, but, in some singular manner, the buried trinkets have gained life, as though the spirits of the men and women who had fashioned and worn them had passed into their being.

From the pyramids come other jewels with the same miraculous power to revive the life of the perished centuries. There was, for instance, the mummy of Queen Aah-hotep, who lived some fifteen hundred years before our era, and who was restored to the light of the sun about fifty years ago. In her wrappings were discovered a diadem of gold and enamel, a necklace of gold, decorated with wrought fastenings at the back; a bracelet of massive gold ornamented with repoussé work, and a golden boat with wheels of bronze, the symbol of the departure of the soul of this wife and mother of kings. The chance immortality that descends upon jewels, and which, a thousand generations hence, may re-create for posterity the mode and manner of the life of these days, imparts to the art of the jeweller a rare significance, and perhaps explains in part the natural love of mankind for works in gold and silver and precious stones. Man goes hence and is seen no more, but the jewels live on, at first the memorials of loved ones, afterwards as heirlooms embodying family traditions, and in the end as the record of a buried nation or of a dead civilisation.

* * * *

To execute in excellent form and finish an ornament composed of many valuable gems, and to mount the stones in the way best

adapted to show up their beauty and lustre requires the special art of a trained craftsman. There are many kinds of setting, but each makes great demands on the skill and patience of the worker.

Thread setting is the term applied to the style in which the gems are outlined by a thin bright thread of gold. The stones are held securely in their settings by grains which are rounded with a graining tool. For coronet setting, the stones suitable for a compact cluster are carefully selected, a piece of flat gold, sufficiently large to receive them is then slightly domed. The setting is fixed on a cement stick and the front carefully cut into form, leaving grains between the central and outer stones wherewith to secure the centre stone, while the points of the coronet are filed to form the setting for the outer side of the gems. In this manner very little gold is visible from the front, while the admittance of light through the coronet setting adds shimmer and beauty to the stones.

In pavé setting, the whole front is covered or paved with stones. Great judgment is required in the choice of suitable stones; not only size but shape and colour have to be considered. When properly drilled the arrangement should be clusters of seven stones touching each other from every position. The best metals for this kind of setting are silver or white gold, *i.e.* silver with a slight admixture of gold or platinum. The stones are entirely held in position by the grains of metal being carefully pressed over the stones with the graining tool. The gems generally used for this style of settings are diamonds, pearls and turquoises; in some designs a rich effect is produced by setting a ruby, or some other transparent stone, in the centre of a pearl or turquoise pavé setting.

Star setting requires peculiar care and skill. Square setting is done in two styles. In the one, a single stone is set in a square cut in the gold, which forms the centre of the ornament, the stones being held at each of the four corners; in the other, a number of stones—say, eighteen—are set in as many squares, each stone being secured at the corners of each square, and separated from one another by a thin line of gold. In lozenge-setting a single stone is placed within a lozenge-shaped space. In some ornaments three or five lozenge-shaped settings are placed in a row, such as on a bracelet or barbrooch. Collet-setting is generally used for topaz, amethyst, chrysolite, and similar stones. A thin wire to form a bearing is soldered to one side of a strip of thin flat gold of the depth required; a bezel or rim that will fit the stone is made of gold with pliers, and

the ends are soldered together. Then a suitable number of points like the teeth of a saw, are formed by filing, and the teeth pressed over the stone, thus forming teeth or collet setting. Glass-setting is the term used for setting moonstones, opals, crystals, and other stones which are cut *en cabochon*. In floral-setting, pearls and other stones are arranged in the form of flowers and leaves on the disc of brooches, or on the centre of bracelets, lockets and other ornaments. The bright cuts made by the graver form the stem of the flowers.

We need not pursue these technicalities. Enough has been said to show that the art of the jeweller is not the simple affair it may appear in the eyes of those who only glance on the ornament or work of art when it is finished. Stones set in a haphazard or slovenly manner, however brilliant in themselves, will look commonplace by the side of skilfully set gems of much less fine quality and lustre. Rare skill and long experience are the first essentials for the proper setting of gems, in order to bring out their fullest brilliancy, splendour and colour. On the angle at which a diamond, for instance, is set will depend to a measurable degree the extent to which when worn it will flash and reflect the light.

A brilliant-cut diamond has fifty-eight facets, but these facets vary in size and inclination. The rose-cut diamond has fewer facets, of no fixed number; this style of cutting is of much greater antiquity than the brilliant-cut. The table-cut gem has a very largely developed table or flat space on the surface, with a bevelled edge or border of small facets. The style of cutting known as the step-cut or trap-cut is adopted for the emerald and many coloured stones. It is subject to rules of proportion far less strict than those devised for the cutting of the diamond in the brilliant form. Translucent and opaque stones, like opal, moonstone or turquoise are commonly cut *en cabochon*, that is, just curved and polished. This form of cutting is to avoid facets and the reflected lights that facets create. Ruby, sapphire and emerald are sometimes cut *en cabochon*; when a garnet is cut in this fashion it is known as a carbuncle.

We have only touched lightly on this question of cutting, as on the question of setting, to enable the reader to form an opinion of the many and various factors which go to the creation of a jewel of merit. Where precious stones are concerned there is also the question of combination. The diamond, writes Professor Church, combines admirably with the cat's eye and the pearl, but it affords too strong a contrast with the turquoise to associate pleasantly with it. And so we

realise how it was in mediaeval times the jeweller so often fathered a painter or sculptor; he had to cultivate a taste for proportion, colour, delicacy of touch, and a sure perception of the value of each effect to produce a work of high merit. Moreover, the product of the jeweller's art had to stand the test of daily use or frequent wear.

We will now leave this subject and proceed to give a brief account of the precious stones themselves. Many have historical interest; with some the fate of kings and empires is intertwined; others are reputed to have brought happiness or sorrow to individuals. It is a strange mosaic of legend, myth, tragedy and romance, and it stretches backward to the earliest records of human life and enterprise.

CHAPTER II

The Diamond

Bright gem instinct with music.—WORDSWORTH.

“



HE who buys a diamond purchases a fragment of eternity. She who wears a diamond adorns herself with the pure rays of Creation's dawn." Thus did a Hindu gentleman, in the florid metaphors of the East, endeavour at one time to convey to the writer the supreme beauty and durability of diamonds. Record of this jewel goes back at least five thousand years, and it is no fanciful conjecture that stones which shone in King Solomon's treasure-house or glistened on the head of the Queen of Sheba are still in existence. Tyre was the chief market of jewels in its day, as the Book of Ezekiel testifies. In God's judgment on the King of Tyre, declared in the twenty-eighth chapter, it is written: "Thou hast been in Eden the Garden of God; every precious stone was thy covering, the sardius (ruby), topaz, and the diamond, the beryl, the onyx, and the jasper, the sapphire, the emerald, and the carbuncle, and gold." Precious stones have been the peculiar glory of the Orient from prehistoric times, and round them have gathered strange lore and customs and legends, many of which it is impossible to fathom, though behind some the meaning seems clear.

A peculiar property assigned in old times to the diamond was that it quickened love between man and maid, and restored affection between husband and wife. Strangely enough, the charm worked by the man wearing the diamond; though whether, when love awoke or revived, it was bestowed on the lady is not stated. Probably it was. Anyhow the charm still works, and where love is there will be diamonds, provided the means to obtain them are at hand.

To the lore of precious stones and the legends surrounding the diamond we will return in the next chapter. Let us glance at the history of the stone in so far as it has been possible to decipher it. From earliest times it has been famous for its brilliancy and extreme hardness. Diamond and adamant are only different forms of the same word, both being traced to the Greek *adamas*, which signifies "untamable," "unconquerable." Alexander the Great is reputed to have first brought the gem to Europe after his invasion of India, 327 B.C. From Greece it passed to Rome, and its fame was thenceforth common property, the Greek name *adamas* yielding to the Latin variation *diamas*. As a graving instrument there is reason to believe its property was known in the East at least 600 years B.C. and, though the translation is disputed, there is no real reason why the sentence in the Bible should not be accurate that occurs in the Book of Jeremiah, assumed to be written about that time: "The sin of Judah is written with a pen of iron and *with the point of a diamond*." In our own island prisoner kings and princes have traced their names and their pathetic story on the windows of their dungeons with a diamond ring.

In the twelfth century a famous book on precious stones was written by a learned Moor of Spain, Mohammed Ben Mansur, but it was concerned not so much with their history as with their magic properties. We find that at one time diamonds were considered to possess the properties of sex, and to be able to propagate their species. Science does not confirm this, but science has confirmed what was discovered at a very early date, that under extreme heat the stone is combustible. Also it was noticed that some stones were able to absorb light and to give it forth in darkness. This too has been confirmed in modern times, though not to the extent that was supposed.

It is difficult to say where the craft of polishing and cutting diamonds was first practised in Europe. There is a mention towards the end of the thirteenth century of a guild of cutters and polishers in Paris. Louis of Anjou had an inventory of his treasures made between A.D. 1360 and 1368 which included a number of cut diamonds; but Louis de Berquem, who had long resided in Paris, and moved to Bruges in 1466, discovered the way of cutting diamonds into regular facets, and so revolutionised the business that he is sometimes spoken of as the father of diamond polishers. A powerful guild was founded at Bruges, which sent forth cutters and polishers on the new plan to the principal cities of Western Europe. Strangely the work was

never really established in Paris. A branch of the guild flourished there under Cardinal Mazarin, but at his death waned, and became extinct by the end of the seventeenth century. On the other hand, London has for centuries been one of the great centres of the diamond trade, and the "old English cutting" is still regarded by lapidaries as a type of the finest workmanship.

Portugal for two reasons was at the height of her power famous for diamonds. Her trade with India brought to her treasuries many fine gems, and in the sixteenth century the idea was promulgated that any diamond exceeding 37 carats in weight became *ipso facto* the property of her rulers. It is doubtful if this right, at least in respect to Indian stones, was ever established in Europe, but its origin may probably be traced to the East, where jewels of great worth were always regarded as the peculiar treasure of kings. Goa, which was for a long while the headquarters of Portuguese dominions in India, lies below the Western ghats but, as distances are judged in Asia, not far from the district where diamonds were found. This district is on the Deccan upland, but on the eastern side, where great rivers have their rise, and it was among those waterworn boulders that many of the earliest gems were discovered. The diamonds of Golconda were famous three hundred years ago. Golconda was never a Kimberley, but a marvellous fortress, built on a great block of basalt that uprises solitary from the plain around it, and so cunningly contrived that to this day it is difficult to discern where the living rock ends and masonry begins. Within it was a deep well of unfailing sweet water, and so the fort was impregnable in those old marauding days, provided the loyalty of the garrison was staunch. Here, quarried out of the rock, were strong rooms which glowed with all the jewels which "the gorgeous East had showered with richest hand" on her kings and captains, jewels which outrivalled the brilliant hues of Oriental sunrise and sunset, and which gave, as they still do give to those who have them in possession, an abiding sense of power and of glory.

The second reason why Portugal was famous for her diamonds lay in her possession of the Brazils. Diamonds appear to have been discovered accidentally while prospecting for gold, and until their actual value was ascertained were used as counters in games of chance. It was a Portuguese military officer, having seen service in India, who guessed their true nature; and making a collection of these rough stones he took them in 1725 to Lisbon, where their identity was established. The discovery was made in the neighbourhood of

Tejuco, a town about 80 miles north of Rio de Janeiro and some 250 miles west of the Atlantic coast. It is now called Diamantina and is the centre of the diamond industry of Minas Geraes. Directly the discovery was made at the end of the seventeenth century the Lisbon Government laid claim to all diamond-bearing lands and streams, granting licenses for anyone to mine who was willing to pay toll for each slave he employed, for all the work was done by slave labour. These Government licenses became in time so extortionate as practically to destroy the industry. Men then took to smuggling and thieving, and no more interesting chapter in human crime could be written than on illicit diamond-dealing, not only in the Brazils but elsewhere, for the comparative ease with which stones could be concealed, and their extraordinary value as compared with their size rendered temptation almost irresistible. Horrible cruelties were often practised in order to terrify men from these malpractices, but with little effect.

For a century, from 1740 to 1834, the year when the Brazils declared their independence, the diamond fields were worked by the Portuguese Government, and all the finished stones sent eventually to the crown jewellers at Lisbon. But to show how fashion has ever governed the popularity of jewels, it may be mentioned that in the eighteenth century all Brazilian stones had first to be shipped to Goa, and from Goa were sent to Europe as Indian diamonds, for it was considered that only Indian diamonds were of lasting value. Later, other diamond fields were discovered in the Brazils, but the exports of South America have never compared with those of South Africa.

The diamond held in highest esteem is the stone of "purest ray serene," but it has been computed that only 25 per cent. of all stones are absolutely pure. Black diamonds are well known, but it will surprise many to learn that red diamonds have also been found. A ruby red diamond of 10 carats was said to be amongst the Russian crown jewels. The Austrian crown jewels are reputed to contain an even larger red stone. After yellow, green is the most frequent tint, but it is usually of a dull character. The most famous diamond of this shade is known as the "Dresden Green," and weighs nearly 50 carats. There are also grey and hyacinthine diamonds, and, rarest of all, blue diamonds, of which the Hope diamond is the best known specimen. It is an eccentric rather than a beautiful jewel. When all is said, the most exquisite diamond is undoubtedly the sparkling stone of absolute purity which refracts the light in a thousand tinted rays.

Among the many curious facts surrounding this jewel of jewels there is none that impresses the imagination more strongly than that its standard of weight should be a seed or berry. As children, many of us have been taught that the locusts which St. John the Baptist ate in the wilderness with wild honey were not insects but beans, the seed of the *carob* or locust tree. It is believed that these locust seeds, in Arabic *girrat*, in Greek *keration*, were the original of the carat. This origin is disputed, and the Indian coral tree, whose flaming red flowers are well known to all residents in the East, is also reputed to be the parent of carat. But in either case the fact remains that beans or seeds were chosen in ancient days to measure the weight of the most valuable stone the earth contains, though to our ideas nothing could appear more variable than the size or weight of such vegetable products. A diamond carat is, broadly speaking, $3\frac{1}{8}$ troy grains, though it varies by small fractions of a grain in various cities and countries.

The mode of calculating the value of stones has undergone many modifications, and it is difficult to lay down an exact rule, so much depending on colour, size and form. Diamonds have greatly increased in value during the last generation, notwithstanding the discoveries in South Africa, and this increase of price promises to continue, for never in their whole history have these gems been more highly esteemed than at the present time. It is computed that half of every stone in the rough is lost in working it into the finished jewel, and it may be of interest to any one who happens to have handled a pebble which he or she believes to be a genuine gem of the first water to know how to work out its ultimate value. Assuming it to be in the rough of only 1 carat weight, and the market value of rough diamonds to be £2 a carat: first the weight must be doubled to be allowed for what will be lost in the working; then multiply the doubled weight (*i.e.* 2 carats) by itself, which squares it and makes four; multiply the result by the value of the rough stone which produces eight, £8 being the selling price of a 1 carat rough stone when wrought and polished. By the same rule a 5 carat stone in the rough would be worth, when wrought and polished, £200, and a 100 carat stone £4,000, this, of course, on the assumption that the original stone was only worth £2 a carat, a middle price, and much below the value of exceptional stones.

Round the diamond there has grown up gradually through the centuries a prosperous industry, giving work to thousands. We do

not speak here either of those employed in freeing the stones from the soil, or others whose business it is to set or sell the jewel when polished, but merely of persons who are employed in setting free the imprisoned glory of the pebble as it comes from the mine. We have already spoken of Louis de Berquem, who flourished in the fifteenth century and founded a school of polishers at Bruges which grew to be famous throughout the western world. Various cities, London among them, in course of time disputed with Bruges its pre-eminence in this respect, but gradually Amsterdam came to be recognised as the centre of the diamond-cutting industry. There are said to be seventy diamond factories in Amsterdam, employing over 10,000 persons; the wages are good, and for expert workmen very high. An attempt is now being made to teach this highly paid craft to British soldiers wounded and maimed in the Great War, and thus to assure them constant employment.

The business of cutting and polishing diamonds has been in the hands of the Jews from earliest times, in fact, it is no exaggeration to say that the Hebrew race has been intimately associated with the trade in precious stones since Tyre flourished. It appeals to their Oriental imagination, and wherever persecution has driven them, there they have carried with them their traditional skill and cunning in the fashioning of gems. The persecution of Jews in the seventeenth century is assigned as the cause for their flight from London to Amsterdam, as in that century London was the headquarters of the diamond cutting and polishing business, but though Amsterdam is now recognised as the chief city in this respect London still holds a high position, and it may be said that no diamond of special worth is ever cut or polished which does not find its way at once to London, and her jewellers given the first refusal. If the back parlours of the leading jewellers' houses of London could give up their secrets, their walls give back the flashing rays that have shone within them they would reveal an inconceivable splendour and wealth.

The beauty of a diamond is dependent, apart from colour and size, on two important operations—cutting and setting. It is doubtful when the true cutting of this precious stone was first practised. From very early times it was polished, often into a curved form, often simply in the natural crystal facets by removing the cloudy films that we see at present. We have seen that Louis de Berquem, at the end of the fifteenth century, discovered that the rays of the diamond might be increased and intensified by cutting and polishing. Charles the Bo

ORNAMENTAL RINGS OF THE RENAISSANCE

These beautiful rings are mounted, as a rule, with a single stone, in a high setting, and are decorated in an infinite variety of ways by means of coloured enamels.

Some of the finest work of the great Italian jewellers of the Cinquecento was concentrated on these delicate and minute objects.



sent three diamonds to him, which, while reduced in size, were heightened in magnificence by this new method. One of these gems found its way into the possession of Henry VIII., and passed from him to his daughter Mary, who gave it to her spouse, Philip of Spain. It passed into the crown jewels of that sovereign and is still possibly at Madrid, though its identity has been lost.

Kentmann, in 1562, mentions two kinds of cutting, the "point" and the "table." The former was simply the natural octahedron, the faces reduced to a perfectly regular form, and polished; but the latter had one apex ground down till the flat surface produced was equal in width to the two adjacent sloping facets added together, and the opposite apex was likewise ground down to a plane, but of smaller extent, and all the surfaces polished. In the case of a thin stone, the portion below the setting consisted of a large plane, while the upper portion was cut as the table.

The "rose" was produced in the middle of the seventeenth century, and by 1665 the Great Mogul was cut into a high crowned rose of 240 carats by the Venetian jeweller Hortensio Borgis, then in India. The "brilliant" cut was discovered by another Venetian, Vincenzio Peruzzi, towards the end of the seventeenth century, from experiments on coloured stones. This was similar in general form to the older table-cut stone, but was worked in a more elaborate fashion, having thirty-two facets above and twenty-four below the "girdle," besides the table and collet, or fifty-eight facets in all.

By far the most important type of cutting, which reveals to the full the diamond's amazing "fire," is that called the "brilliant." In this form the greatest circumference of the stone is called the "girdle"; the portion lying above the girdle is the "crown," and that below is the "culasse." The crown terminates in a large plane called the table. Meeting the table in an edge are eight triangular facets called the "star" facets; meeting the girdle in an edge are sixteen upper "skill" facets, and between the star facets and the upper skill facets are eight lozenge-shaped facets known as "bezils." Below the girdle, that is on the culasse, are sixteen triangular facets meeting the girdle in an edge. These are the lower skill facets; and running from them to the lowest portion of the stone are eight facets, with five sides on each, called the "pavilions." The lowest portion of the stone is a small plane called the "collet." Sometimes the upper and lower skill facets are collectively referred to as "cross" facets. There are thus thirty-three planes in the crown, and twenty-five in

the culasse. The table and collet are both parallel to the plane of the girdle.

There is a general proportion in the finished stone which has become, by the experience of generations of cutters, to be regarded as a standard, because a stone so proportioned is found to give the greatest brilliancy. Thus if the diameter of the collet be taken as unity, the girdle should be nine units in diameter, and the table five units, also the vertical distance from table to girdle should be one-half the vertical distance of the collet from the girdle. The exact finished form of the stone is not fixed, but is modified by the cutter to suit the rough gem he is dealing with, so as to sacrifice as little material as is consistent with a good result. In the case of colourless and transparent stones the propositions given above are adhered to more or less closely, but the plan of the stone may be considerably modified. Thus it may be generally circular or square or oblong, as in the Pitt or Regent diamond, or triangular. Again, a coloured stone is usually cut in a rather more shallow form; the deeper the colour, usually the thinner the stone. If the stone were of the proportion of a colourless gem the tint might be so deep as to lose a great deal of its beauty.

The presence of a flaw or other imperfection may considerably modify the form of the finished stone. As a rule English cutters prefer to have the gem perfect technically even at the sacrifice of a good deal of weight, and hence flaws are removed altogether, or at least the stone is so cut that the flaw comes in the girdle, where it is not conspicuous. An English-cut stone can often be distinguished by the greater accuracy given to the angles of the facets, so that the finished jewel is exactly symmetrical.

There is another process known as cleaving, perhaps the most dramatic operation in industry. It is said to have been known in the East from ancient times, though in the West it is comparatively modern. In cleaving a diamond the stone is cemented firmly to the end of a support in such a position that when the support is fixed on the bench so as to be vertical, the cleavage plane will also be vertical. The support is then put into position, and means taken for ensuring the collection of any fragments. A steel blade is now placed in the cleavage plane at the desired point and a sharp tap delivered on the blade by a hammer held in the right hand; by repeating this process a cleavage octahedron free from flaws is produced. This sounds perfectly simple, but think what it means when the stone is a Cullina diamond, and a single stroke may splinter it into a thousand fragments.

THE CULLINAN DIAMOND
OR
"STAR OF AFRICA"

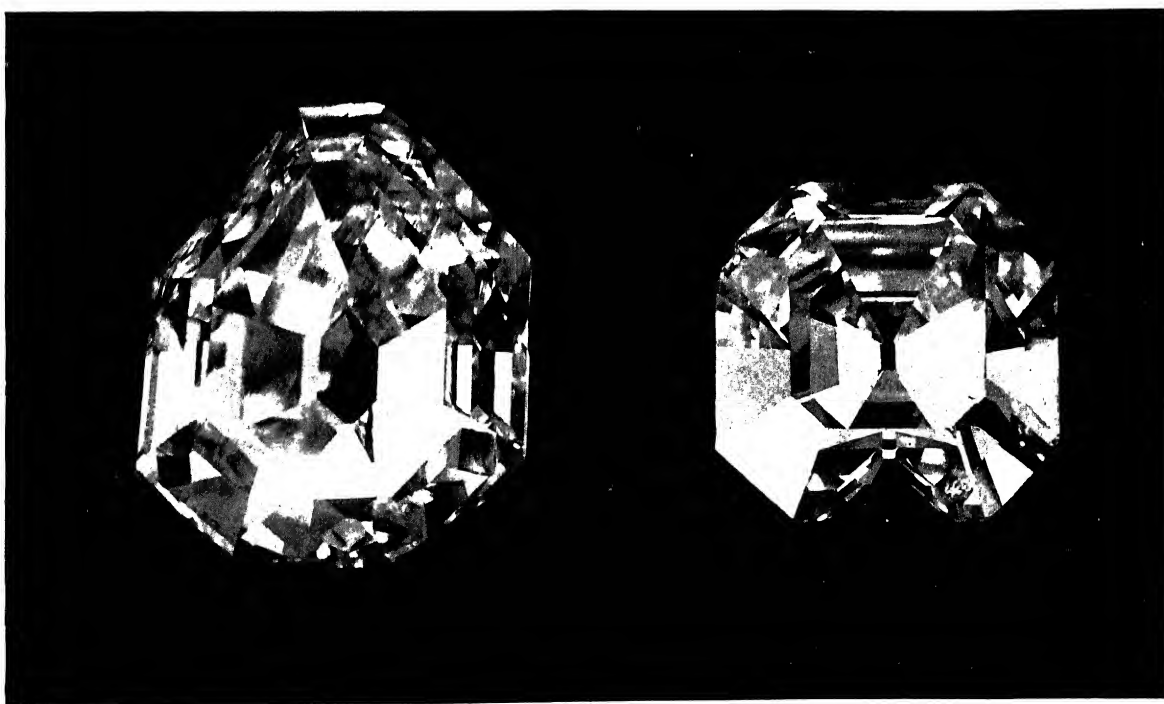
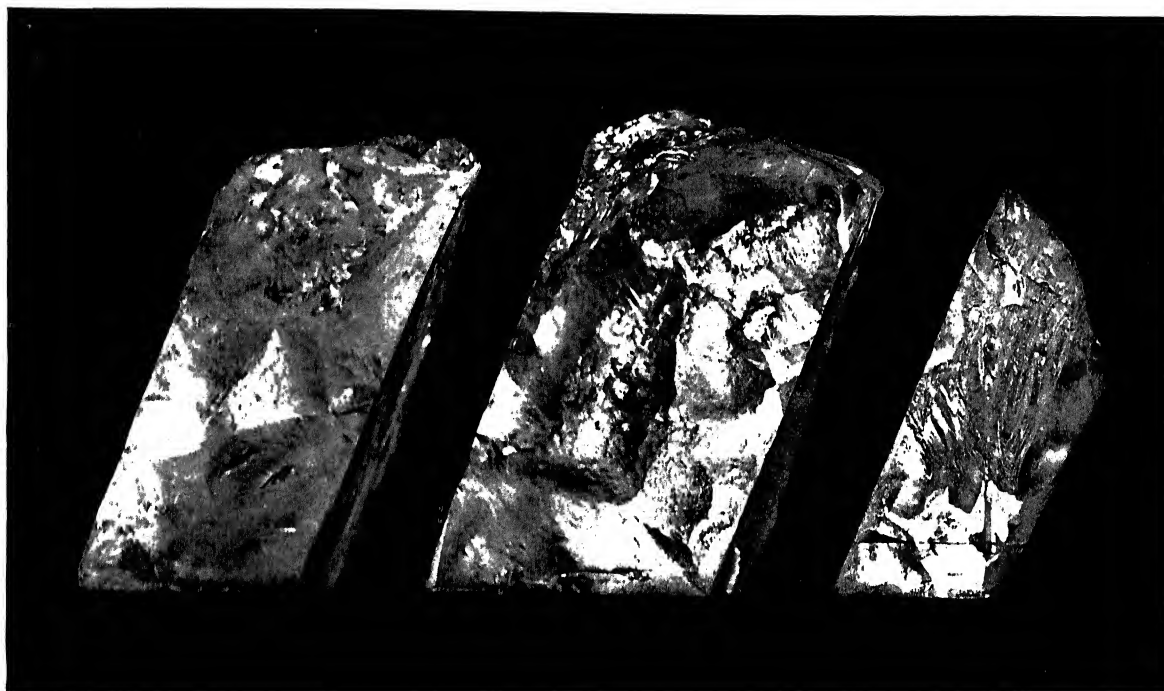
The entire cleft stone placed
together to form three sections.

The two principal "Stars of Africa"
during the process of being polished.

Pendeloque Brilliant, now
weighing 516 carats, in
the Sceptre of the Empire.

Square Brilliant, weigh-
ing 309 carats, in the
Imperial State Crown.

These two stones are the largest cut Brilliants in existence.



if there has been any misjudgment about its constitution. It is this factor which gives such a dramatic interest to this operation; a single tap of the hammer may produce a jewel of incalculable worth or may reduce the stone to a collection of brilliants, neither better nor worse than thousands upon the market.

The most beautiful stones found in recent years have been from the well-known diamond mines of South Africa. South African diamonds are as famous for their purity as for their size. Until January 25th, 1905, the largest known diamond in the world had weighed in the rough just under one thousand carats. It was a South African stone. On the evening of that day a workman of the Premier Mine, which lies some twenty miles to the north-west of Pretoria, was walking home when his eye was attracted by a glitter in the mine bank. On the cause of it being unearthed it was discovered to be a pebble weighing 3026 carats, whose rough value, according to the table we have given above, would have worked out at over eighteen millions sterling. It was three times larger than any diamond known before, and on examination was found to be of the first water. This was the famous Cullinan diamond, named at first after the chairman of the Premier Diamonds Company, Sir T. M. Cullinan. By desire of King George this name has now been changed to the more striking one of "Star of Africa." The Cullinan diamond, as it was then called, was bought by the Transvaal Government for £150,000, and presented to King Edward VII. on his birthday, November 9th, 1907. It is said that, for safety, when the giant gem had to be conveyed to England, it was sent in an ordinary unregistered letter packet, no elaborate police protection being deemed sufficient to save the bearer of such a national treasure from robbery or murder. Two months later the great stone was in the hands of Messrs. Asscher of Amsterdam for cutting. On February 10th it was cleaved into two parts, weighing respectively $1977\frac{1}{2}$ and $1040\frac{1}{2}$ carats, from which the two largest stones have been made. One is a pendeloque, or drop brilliant, the other a square gem, the first being placed in the sceptre, the second in the crown of the regalia, while there are half a dozen fine gems left over.

The term "first water" which one so often hears is applied to "specially blue-white stones." The best diamonds are said to be white, but they should tend to blue-white rather than to yellowish-white or brownish-white. It is for the output of these dazzling blue-white stones that South Africa has secured so high a reputation.

The existence of diamonds in South Africa was known long before the acquisition of Cape Colony by the British. There exists a missionary-map, printed about 1750, and across a track of country, now represented by the diamond field of Griqualand West is written: "Here be diamonds." A century elapsed before any attention was paid to this bald statement, and it is only fifty years ago, *i.e.* in 1867, that the modern discovery of diamonds was made. As in the Brazils, so in Africa, the discovery was due to chance. The children of a Boer farmer named Jacobs were playing with some glittering pebbles, and a neighbour, one Niekerk, said to their mother that the white shining stones reminded him of the City of Heaven in the Bible. An Irish ostrich farmer, named O'Reilly, thought it wise to ascertain how far the playthings of the little Jacobs were like to the jewels in the crowns of glory of the Blessed Saints, so he obtained consent to take them to Cape Town. They were submitted to a geologist, who declared them to be diamonds. One was sold for £500 to the Governor of the Colony. The news soon spread, and there was a rush for the veldt where bits of stone worth £500 were to be picked up.

It was found that many diamonds were in the possession of natives, who, having no idea of their value beyond the fact that they glittered, had been collecting them perhaps for centuries. Early in 1868 a Hottentot shepherd turned up with a stone of 83 carats, which he offered to a storekeeper for £200; but the trader was cautious, and feared to risk the money. Niekerk heard of it, gave the Hottentot £400, and sold the stone the same day to a Dutch diamond dealer for £12,000. This transaction let loose a flood of adventure. There was a rush to the diamond diggings like there had been to the Californian gold-fields in 1849. The wildest scenes prevailed; law and order were enforced in the roughest manner, and the earliest stories of the diamond diggings are red with crime and riot. Inasmuch as a diamond is far easier to handle than a nugget the temptation to theft was the greater.

For the first three years it was believed that the stones were only to be found in watercourses or where water had flowed. Washing was started in 1870, and it is certainly typical of recent times that the first "pan" where this operation took place was at once claimed by the Berlin Missionary Society. The children of a farmer named Dutoit gave the clue to the fact that there was no real connection between rivers and diamonds, for on their father's farm, far away from any possible river, they were constantly picking up stones.

A curious incident in the South African diamond industry is that in the early days scientists ignored the diggings. Professional experts, sent from Europe, took no pains to hide their incredulity of the future ; many persons were deluded into throwing up their interests in the earliest diggings. But with the discovery of diamonds in the blue clay the industry assumed another phase, and from 1870 onwards it has been worked more and more on scientific lines, until to-day the South African fields may rightly claim to be one of the most valuable mining enterprises in existence. It is difficult to state the exact value of their output, say during the last five-and-forty years, but one hundred million sterling is not an unreasonable figure.

The political influence of the fields has been even greater, for they popularised South Africa and gave to Cecil Rhodes the opportunity his genius required ; it was with the wealth he had gained from diamonds that he was able to carry the British flag almost to the Equator. Diamonds gave to the British Empire Rhodesia, and without Rhodesia Britain's power in Africa would have been different from what it is. There is every reason to believe that new fields will be opened out in the future as the South African Union proceeds with the development of its unbounded resources. There are mines in, what was called, formerly, German South-West Africa, whose extent is not yet known ; others will probably be discovered elsewhere.

There is no occasion to follow the story of the diamond further in this chapter. In the next we will describe some of the more famous specimens, and dwell lightly on the curious lore that has gathered round this "gem instinct with music"; for in the beauty of the diamond there exists that inexplicable fascination which one associates with great music. But just as the same sonata or fugue will sound differently in our ears according to the player, so will the beauty of the diamond vary according to the genius of the setter. Each stone has its own individuality, and to obtain the full value of it, it has to be presented with the touch of an artist, with the imagination of the poet or the musician. Only so does the diamond shine forth in its full glory when it appears as a dignity or adornment of man or woman.

CHAPTER III

Diamonds, Legendary and Historical

*Behold I have made thy forehead strong against their foreheads.
As an adamant, harder than flint, have I made thy forehead.
Fear them not.*—BOOK OF THE PROPHET EZEKIEL.



THE Western world is apt to regard the diamond merely as a glittering stone. It often serves as a text for a sermon on human vanity; at times it is denounced as a mere object of display, or is made to figure as a symbol of riotous living. But in the East, from immemorial ages, a far deeper significance has been given to the stone; it has been regarded as stored in the hidden treasures of the Omnipotent, and revealed to man for the increase of his strength and glory. The wearing of this jewel upon the brow is deemed a special source of power, and it was not only in Israel but throughout the Orient that he whose forehead was as an adamant or as a diamond (the two words are identical) was thought to have no occasion to fear his enemies.

It is impossible to dismiss as foolishness all the legends that have grown up round this stone. There is wisdom behind many of them, and also, it may be, an element of truth which the more slowly moving mind of modern civilisation has failed to detect. A few years ago, by good chance, the writer was permitted to hold in his hand the Great Star of Africa, the larger part of the Cullinan diamond. The bigger fragment of the Great Star since it has been cut weighs 516 carats, nearly five times the size of the Koh-i-Noor; and its value runs into millions. The polished stone was unset and it just filled the palm of the hand. As he looked into its translucent depths, he who had always laughed at crystal-gazing, and derided the idea of any special powers of precious stones, became conscious that some force was at work which was

exercising a marked influence on his mind. It seemed as though this marvellous jewel was drawing out his very soul, and he felt as a man feels under the influence of a drug, and as though he would be content to sit idle for hours gazing into its depths, certain that in the end some wonderful revelation or vision would be vouchsafed to him.

There is no question that these great gems have exercised extraordinary influence over human minds; the tragedy of the Koh-i-Noor, the most famous historical diamond in the world, in the sense that it has been linked through centuries with the fortunes of Empires, testifies to this.

The theory was at one time held that the colour of the diamond changes according to the truth or falsehood, the sincerity or deceitfulness of the wearer, and that its brilliance may be dulled by the evil heart of the wearer of the gem. This was perhaps one reason why white stones, as they are called—diamonds of absolute purity, free from all tints, such as those for which the South African mines are so deservedly famous—have always been held in most esteem. Science and legend and fashion all set a higher value on the white stone.

Diamonds were at one time worn in the ear as a special protection against insincere counsellors. It was thought that they would act as guardians and divert falsehood. Perhaps the most extraordinary story of the power of this jewel to change its colour under varying circumstances was told to the writer many years ago. He tells it here, believing it has never before appeared in print.

One moonlit night in India, under a tropical velvet sky, he had been taken by a native guide to a jungle glade. A great waterfall faced them that broke into a thousand cataracts, each glistening like diamonds, and its mists shimmered in the moonlight as though they were spun silk. The roar of the broken waters rose and fell on the gentle breezes of the night. In that sylvan solitude this tale was told to him in the vernacular.

A ruined temple, the guide said, stands on a forsaken island a little way upstream. In this temple, so the story ran, there was formerly the figure of a Hindu god, on whose brow gleamed a great white diamond. Hither, early last century, came a British officer. Some say he was on his way to the coast to escape from his creditors, others that he was merely on a hunting expedition, and, following a wounded tiger, arrived at the river just opposite the island.

THE ROMANCE OF THE JEWEL

In those days only a narrow stream, not more than ten feet wide, separated the island from the mainland, but it was a millrace, deep water that cut a way through living rock, and to falter in the jump or miss the landing was certain death. The native trackers tried to dissuade the Englishman from crossing to the island, but he merely laughed, and took the leap easily. It was late in the afternoon, when, breaking through the undergrowth, he found himself standing alone before a temple, and, crossing the verandah, he entered an open door. All was darkness within save for a single sunbeam which he noticed, as his eyes grew accustomed to the gloom, fell on the shoulder of a stone god. As the sun sank lower the beam moved until at last it shone upon a glittering jewel in the brow. With a shout of triumph the man leapt to the knees of the graven image and prized from its forehead with his hunting-knife the great diamond.

Outside the temple he examined his prize, the setting sun calling from its clear depths a thousand rays. Never had he seen a white stone of purer water. Wrapping it up carefully, he placed the jewel in his breast pocket, and found his way back to the river bank. But the night mists had already gathered thickly, and to attempt the leap in the perplexing half-light was to court death. He decided to stay on the island for the night, and he slept on the verandah of the temple. He woke in the dawn shivering violently. It was the chill that preceded fever, so he thought, and he waited for the sun to rise to dispel the malaria. Drawing the jewel from his pocket, he let the first rays of dawn linger on it; it seemed he had been deceived the night before, that it was not of the purity he had imagined, but had a reddish tinge. Still it was a magnificent jewel of great worth, and his fortune was made. Thrice that day he made his way to the river; thrice he was afraid to jump. At noon he found a luncheon basket had been thrown by his trackers across the water, so that he had food; but though he shouted, no human voice replied. In the evening he was again in the temple as the single ray of the setting sun which entered through a narrow window in the western wall passed over the face of the god. That night it only lit up a black gash in the forehead, whence the gem had been stolen. The man was now weak and ill, and on leaving the temple, as he gazed on his treasure, it appeared to him to be no longer a diamond but a fiery opal. Fascinated by the gleam, he could hardly withdraw his eyes from it. Suddenly he gave a terrible cry, and flung

it far from him ; he thought he had seen his own life blood flowing through the veins of the stone. For a while he sat still, shivering in a cold sweat of terror. Gradually he recovered his nerve, and when the moon rose he hunted for the stone in the grass and replaced it in his breast pocket.

On the third evening there came a friendly shout from the river bank. His oldest friend, a brother officer, warned by the native trackers, had come quickly to find him. He was then lying peacefully on the verandah. When his friend shook him by the shoulder to waken him a great red jewel fell from his breast and rolled into the sunlight. The friend had no time at the moment to pay heed to it ; he was doing his best to restore life. But it was too late. The despoiler of the god was dead.

When at last there was nothing more to be done he turned to look for the jewel, but it had disappeared. Wandering into the temple he watched the same scene of the wandering sunbeam that his dead friend had looked on three evenings before. Again the ray passed over the face of the god, but as it fell on the forehead there was now no gash, but a shining white diamond. Almost unconsciously he associated it with the jewel that had fallen from the dead man's breast, and his lips formed the sentence, "But it was a ruby."

In the gloom from behind the image there stole forth an ash-smearing priest. Without a word he seized the man by the arm and led him forward, raising his hand till it fell into the lap of the god. It was wet ; he withdrew it hurriedly and saw there was blood on it, which he perceived had dripped from the forehead of the image. Then he knew. It was the life-blood of his friend—he who had tried to rob the god of his supreme glory. It had been sucked from his heart by the vampire stone, and the price of the jewel was his life. That, briefly, was the story told under a tropical midnight sky to the diapason of a great waterfall. Believe it or not as you will, the hearer will never forget it.

The rational conclusion that one draws from a legend of this nature—and their name is legion—is that it was invented by priests in rough times as a safeguard of their treasures from rude hands. No doubt there is some truth in this, but they who find pleasure in believing that diamonds have peculiar powers for good or evil—for good when rightly used, for evil when abused—let them listen to the recital of the story of "The Mountain of Light"—the Koh-i-Noor.

The earliest authentic account of the Koh-i-Noor, which is an Indian stone, and probably came either from the Kistna or the Mahanadi river, occurs in the sixteenth century *Memoirs of Sultan Baber*. As in the story already related, the legend runs that it was the spoil of a Hindu temple, having been worn for thousands of years as an armlet, or held in the hand as an orb by an image of the god Krishna. When the memoirs were written, it was said that after this sacrilegious theft the diamond had never passed by heritage, but only by murder or theft from owner to owner. With this reputation already gathered round it the famous jewel enters history, for it becomes part of the spoil of the Sultan Baber, who invaded India from the north in the early half of the sixteenth century, when Henry VIII. was on the throne of England, and founded the Mahommedan Empire of the Great Moguls. Agra was then the chief treasure-house of the overthrown Hindu monarchy. Baber sent thither his eldest son Humayun to acquire what treasure he could lay his hands on. Among the jewels handed over to Humayun was the famous diamond, which was to play so ill-omened a part in the fortunes of Baber's line. The stone is said to have weighed at that time 793 carats. A century later the French traveller Tavernier described it as weighing 280 carats. This loss was said to be due to the lack of skill of a native lapidary, but there is reason to believe it was rather due to his dishonesty, and what came to be known as the Orloff diamond in the Russian crown jewels was the missing part of the Koh-i-Noor. After the latter stone came into British possession it was again cut and polished, and now weighs 106 carats.

Humayun sent the Great White Stone to his father, who placed it in the Imperial treasure-house at Delhi. But its spell had already worked upon the Emperor's son; and he resolved to gain possession of it, no matter at what cost. Many plots were laid and miscarried, but two years later one succeeded. The gem passed again into the hands of Humayun, but Baber heard of it and compelled his son to restore it. Then there was anger between them, even though he was the favourite child. Later, Humayun fell sick of a fever and seemed likely to die, and his father sought to save his life. His counsellors, knowing Humayun's infatuation, suggested he should have the white stone from Agra, but Baber refused to part with the diamond, which had already come to signify sovereignty. He cried—"I will take my son's illness upon myself." The fever left Humayun and seized on the Emperor. Exclaiming, "I have borne death away from my

boy," he died. And Humayun reigned in his stead, and his father's jewels became his jewels.

From Humayun the diamond passed to the great Akbar, perhaps the mildest and wisest of potentates, Solomon not excepted, who has ever ruled an Oriental Empire. The stone brought him no harm, and it passed to his son Jehangir, in whose reign there came to the Mogul court at Delhi an ambassador from the court of St. James's, Sir Thomas Roe, sent there by James I. in the year of 1614, whose arrival marked the first official connection between England and India. Sir Thomas heard of the great diamond, and speaks of it in his writings, though whether he saw it is doubtful, for it then shone on the breast of the Emperor's beloved Empress, Nur Jehan, "The Light of the World." These two Imperial lovers still sleep together in the quiet gloom of that noble mausoleum that lies outside the walls of Lahore, just beyond the river Ravi.

Nur Jehan's son was Shah Jehan, one of the most extraordinary sovereigns who has ever ascended a throne. No other human being rejoiced in jewels in the manner he did, the only one to come near to him in this respect being the Empress Catherine of Russia, who lived a century and more later. Shah Jehan constructed the Peacock Throne of Delhi and built the Taj of Agra. The Taj still stands as the most beautiful poem man has ever created out of stone; the Peacock Throne has long ago been dispersed, though it still lives in one of England's greatest poems.

Here is a bare description of it. The throne proper was six feet long, and stood on six huge legs of solid gold, set thickly with emeralds, rubies and diamonds. Two life-size peacocks with eyed tails outspread, formed a background for this seat, and the plumage of the royal birds was truthfully copied in precious stones. Between the two peacocks perched a life-sized parrot, cut, it is said, from a single emerald. Overhead stretched a canopy of soft-hued silks, supported on twelve pillars of gold thickly studded with jewels and fringed with ropes of pearls. But the crowning glory of this magnificence were the eyes of the peacocks, composed of four splendid diamonds, one of which was reputed to have been the Koh-i-Noor. Never have jewels been used with a more lavish hand, or their beauties assembled with nobler effect to astound the mind of the beholder, and to magnify the dignity of him who alone had the right to sit upon that seat. The fame of the Peacock Throne spread rapidly throughout the world. There is no doubt men talked of it in England in Milton's time, and

that it was the Peacock Throne of Delhi that gleamed before his sightless eyes when he wrote the famous opening lines of Book II. of *Paradise Lost* :

High on a throne of royal state, which far
Outshone the wealth of Ormus and of Ind,
Or where the gorgeous East with richest hand
Showers on her kings barbaric pearl and gold,
Satan exalted sat, by merit raised
To that bad eminence.

The Peacock Throne was in truth a devil's seat, for it led to the deposition of Jehangir by his stern and fanatical son Aurungzebe. Jehangir spent the last seven years of his life in prison, but he had been allowed to take with him many of his beloved jewels, and it is said the last years of his life were solaced by gazing into the depths of "The Mountain of Light," and that in its unfathomable caves of dazzling purity he found that peace and contentment that has come to other kings in exile through the beauties of music, of sculpture and of painting. Who shall define the joy that dwells in a thing of beauty? It is certain that among exquisite and consoling things must be counted the perfect gem, be it diamond or pearl, ruby, emerald, or sapphire.

When Jehangir died, that strange Mahommedan Puritan, Aurungzebe, wore the Koh-i-Noor always in his turban. No doubt it was with him as the prophet Ezekiel had described two thousand years before: "As a diamond have I made thy forehead. Fear not." He believed that so long as it shone on his brow his power was invincible. Mohammed Shah, grandson of Aurungzebe, the last of the Great Moguls—for his successors were too feeble to hold their kingdom together—was to lose first his empire, then his jewel of empire. Nadir Shah had invaded Northern India from Persia, sacked Delhi, and carried off the Peacock Throne as plunder—plunder said to be of the value of 30 millions sterling. A truce was made with the feeble Mohammed, who, while sacrificing many possessions, clung to the Koh-i-Noor. He still wore the jewel in his turban, and at a friendly Durbar when the two monarchs, conqueror and conquered, met in open State, Nadir Shah craftily suggested that as a sign of amity they should exchange turbans—a common form of etiquette. Mohammed Shah could but consent, and so the great diamond passed for ever from the possession of the Moguls, the descendants of the Emperor Baber. This was about the year 1750.

It was Nadir Shah who gave to this diamond the name of Koh-i-Noor, or "Mountain of Light." It brought no luck to the cunning thief, conquering captain though he was, and he died, assassinated by a courtier. His wretched son Shah Rukh, a feeble ruler, was deposed. Like Jehangir, in the hour of misfortune, he found solace in the jewel, which he craftily concealed. Tortured horribly to disclose the hiding place of the diamond, he had not only boiling pitch poured over his head, but finally had his eyes put out. Nevertheless he clung to the Koh-i-noor, and invested the stone with a new prestige, for in the end he was nominally restored to the throne, so that the old saying was verified that sovereignty rests with the Koh-i-Noor.

Once again was the lure of the diamond and its amazing hold over its fascinated owner to bring ruin, when some years later Shah Raman paid the same penalty for closely clinging to the great crown jewel. He was blinded by his brother, Shuja Khan, but still held to the Koh-i-Noor, and carried it with him into prison, where for a short time he successfully concealed it. But one day an officer in attendance scratched his hand on the plaster of the wall, and, in search for the cause of the hurt, felt a sharp corner of the stone, which he removed from its hiding-place and carried to the usurper, certain of a reward for so great a find. By this time the Koh-i-Noor had travelled as far as Kabul, the capital of Afghanistan.

In this obscure royal court English eyes first saw the Koh-i-Noor, though its size and value had long been known abroad. A chance traveller sent back to England a glowing account of the barbaric splendour of Kabul. Shuja's magnificence brought him to ruin. Shuja was treated by a younger brother in the same fashion that he had treated his eldest brother, and thus it came that the two blinded brothers—both Shahs—were reunited in their pitiful condition, and escaped to Lahore accompanied by Shuja's wife, to whom they entrusted the Koh-i-Noor. Arrived in Lahore, the one-eyed Runjeet Singh, Maharajah of the Sikhs, "the Lion of the Punjab," heard of Shuja's treasure, and determined to possess himself of it, for he too had a love for jewels. His emeralds were famous. He sent for the Koh-i-Noor, but Shuja refused to surrender it, and was imprisoned. Runjeet Singh, thinking that possibly the captive's wife had it in her keeping, starved her till she gave up all her jewels, but not the "Mountain of Light." Shuja was released, and repaired to Shaderah, near Lahore, and it was there on June 1st, 1813, that the

Koh-i-Noor again changed owners. By this last transfer it returned to India, its original home, after having been in Persia and Afghanistan for three-quarters of a century. On Runjeet's acquiring the diamond, it had already been cut in the Indian fashion, when or by whom was not known, and he continued to wear it in a bracelet to the end of his long life.

After Runjeet's death Hindu priests claimed that Runjeet had transferred the mysterious jewel to them to adorn the brow of the image of Juggernaut, but the royal treasurer refused to yield up the Koh-i-Noor except to the original heir and eldest son. This Maharajah wore it but a short time when he perished by poison, and the usurper succeeded him. Assassination quickly finished his career. Duleep Singh, the rightful heir, was at that time an infant, and the regency was assumed by one of Runjeet's widows and Lal Singh. The Sikh wars followed, and the Punjab became part of the British Empire. The significance of this historical diamond was thereupon recognised, and it was specially named in the Treaty to be given up to the British Crown in token of submission.

Sir John Lawrence, afterwards Lord Lawrence, was Lieutenant-Governor of the Punjab at the time the diamond was handed over to him. For security he put it in his waistcoat pocket. Changing his clothes for a State banquet in the evening he forgot all about the Koh-i-Noor, till someone reminded him at dinner. He remembered it was in his waistcoat pocket, and so for a few hours it lay at the mercy of anyone who might have had access to his dressing-room. An aide-de-camp was sent to fetch it, and on the morrow it was placed in safe custody. We tell this story as it was told to us by a personal friend of Lord Lawrence, for it has formed the basis of a rather extravagant legend. The Koh-i-Noor is now valued at £100,000, and is the personal property of the English Royal Family. Only a copy of this famous jewel is shown in the Tower of London.

Sixty-eight years have sped away since the Koh-i-Noor came into the possession of the British Crown, and it cannot be said that during that period it has brought ill-luck to this country. Queen Victoria often wore it. It was worn at the coronations of her son and grandson. Its size and beauty are said to have been reduced by unskilled cutting; it is told that the great Duke of Wellington watched the operation. In all history it would be impossible to find any other precious stone which for four centuries has played such a leading part in the rise and fall of Empires.

There are many other stories of diamonds which are supposed to bring bad luck to their owners : for instance the well-known Hope blue diamond, which has always been a stone with a curse. It was brought from India by Tavernier, the French explorer, who sold it to Louis XIV. Fouquet, the king's famous Minister, borrowed the stone, and fell from his high estate. Marie Antoinette had forsworn its wear before her proud head was placed under the blade of the guillotine. Her favourite friend, the Princesse de Lamballe, had occasionally worn it before the "Day of Pikes." In 1830 it was bought by Mr. Henry Thomas Hope, from whom it derives its name, for £18,000. He escaped any evil consequences. It then became the property of Lord Francis Hope. Lady Francis Hope (a well-known actress) when she parted from her husband attributed all her troubles to the Hope diamond, and prophesied evil for its purchaser. The stone passed from Lord Francis to Mr. Weil, a London diamond merchant, who sold it to a New York jeweller, who could not find a buyer for it, and fell into financial trouble. The unlucky gem found a buyer in M. Jacques Colot, a French broker, who paid £60,000 for it. He sold it to a Russian, Prince Kanitovski. The prince lent the diamond to a beautiful actress at the Folies Bergères, and shot her from a box in the theatre on the first night she wore it. A few days afterwards the prince was stabbed by revolutionists. Colot had not got rid of the evil heritage of the diamond, as he went mad and committed suicide. The next aspirant for disaster was Simon Montherides, a Greek jeweller, who is said to have been thrown over a precipice and killed. From Montherides it passed into the custody of Abdul Hamid, who speedily lost his throne.

The next victim of the stone was a Mr. Habib, who bought it from agents of the Young Turkish Party, and exhibited it in London in June, 1909. In November of that year Habib went down with the French liner, *La Seyne*, in Rhio Straits. In 1911 Mr. Edward McLean, proprietor of the *Washington Post*, secured the stone for £60,000. Even people devoid of superstition will find the long trail of disastrous coincidence attached to the Hope diamond a very uncanny one. "It has continued," says a writer in the *Daily Express*, who records the history of the stone here given, "to sustain its tradition of disaster." In 1919 Mr. McLean's only son, a closely guarded heir, fell a victim to a passing motor-car near his father's house at Washington.

Perhaps, in one sense, the unluckiest of all diamonds is the famous Braganza stone found in the Brazils, which after having enjoyed an almost fabulous reputation as the most superb diamond in the world, and at one time valued at three hundred millions sterling, was at last discovered to be a humble white topaz.

The Pitt diamond, which laid the fortunes of the family which was subsequently to provide England with two of her greatest Prime Ministers, was an Indian stone, and came probably from the very same bed that centuries before had yielded the Koh-i-Noor. Its history only goes back to the eighteenth century, when the story is that in some way it came into possession of a low caste Hindu, who, hiding it in bandages tied round a wound, made his way to the coast and discovered it to a truculent English sea-captain. This worthy had a short way with him, for when the Hindu showed an inclination to haggle, he tipped him overboard and took the pebble down to Madras and sold it for £1000 to that masterful interloper, Thomas Pitt. The sea-captain, so the old story goes, spent his thousand on drink, had delirium tremens, and hanged himself. Thomas Pitt, father of the Earl of Chatham, had lately been made by the East India Company Governor of Fort St. George. He returned home, spent £5000 in having the stone cut and polished, and made a prodigious profit by selling the gem to the Duke of Orleans, the Regent of France during the minority of Louis Quinze, for £135,000. This took place in 1717, and henceforth the stone was called the Regent. Several years later it was valued at half a million sterling, but it disappeared during the French Revolution and has never been heard of again.

It was so with the Diamond Throne, which in the seventh century a Chinese Buddhist pilgrim declared to have been placed during the Golden Age beneath the Tree of Knowledge where Buddha sat and meditated. This throne was made of a single diamond, one hundred feet in circumference. But the world grew more and more blind and foolish and wandered ever farther away from true wisdom, so the Diamond Throne was lost, and it now lies hidden from human eye under dust and rubble. Some day it will again be revealed!

These stories, legendary and historical, have been touched on to show the individuality and romance that exist in precious stones. They are only examples. Were it possible to examine the jewel-chests of the ancient homes of England, it would be surprising to hear

THE EMPRESS JOSEPHINE'S NECKLACE

Composed of twelve antique sardonyxes engraved with classical subjects in intaglio ; the gems, which are surrounded with brilliants, are united to one another by scrolls of delicate gold-work each set with a pearl and having three pearls pendant.

The property of the Hon. Mrs. Lionel Cust.



the intimacies that cling to this or that stone or setting of stones. Here may be a diamond, now the centre of a tiara, that was worn first on the wedding robe of a bride who brought wealth or power to the family generations ago. Or here is another gem that glowed on the doublet of a gallant gentleman, who went to the scaffold for loyalty misplaced, or for principles held dearer than life. There are jewels which mark every epoch, almost every eventful episode in the story of great houses and noble families.

The most historic diamond necklace in the world was that famous ornament which helped to bring about the fall of the French Royal Family and the death of Queen Marie Antoinette. The "Affair of the Diamond Necklace" loomed large in French politics, and Carlyle has given us a matchless picture of all its ramifications. It began with an appeal to the vanity and covetousness of the Queen, and it ended with the fall of her silvered head into the basket of the guillotine. Put briefly, it was a successful intrigue on the part of Mme. de la Motte to acquire a necklace worth £100,000. She began by persuading the Cardinal de Rohan, who was not on good terms with the Queen, that Her Majesty would make up the quarrel if he would assist her to acquire the jewels secretly and pay for it by instalments. In the gardens of Versailles, in the pitch dark, a meeting between sovereign and prelate was arranged, but the Queen was personated by Mlle. Preteaux de la Villette, sufficiently muffled up as to be unrecognizable. The Cardinal played his part, persuaded the jewellers to whom it belonged to give him the ornament, and duly presented it to the Comtesse de la Motte. This woman at once sent the necklace to England, where it was taken to pieces and the gems sold separately. The jewellers now applied to Marie Antoinette for payment, and she disclaimed all knowledge of the matter. In the course of the trial which then took place the Cardinal was acquitted, but the woman de la Motte was found guilty, was branded on the shoulder with a fleur-de-lis (precisely like Miladi in *The Three Musketeers*), and sentenced to imprisonment for life. She escaped in 1787, just before the Revolution, and coming to England, wrote a book about the infamous "Affaire." But the unfortunate Queen, who has been proved historically to be innocent, never recovered from the odium which clung to her name among the populace. It undoubtedly helped to her tragic end. Connoisseurs describe this historic *parure* as a glittering and costly ornament, arranged without beauty or taste. But it set the fashion, strangely

enough, for wearing diamonds in a mass, with as little of the setting showing as possible.

As it has been, so it will be. For jewels, be they diamonds or other gems, endure from generation to generation. Their setting may vary according to the taste of the wearer, but the stones do not change. They live on as heirlooms, visible links in a long continuity, and the new bride, when she enters the family, finds a right pride in wearing them. As every story goes to show, luck, good or evil, lies not in the stone itself, but in those who possess it. To paraphrase slightly a well known passage of Shakespeare: "This is the excellent foppery of the world that when we are sick in fortune—often the surfeit of our own behaviour—we make guilty of our disasters *the jewels we wear*, as if we were villains by necessity; fools by heavenly compulsion."

Let us be honest with ourselves and admit that we find joy in the glory of the diamond. Leave moralists to declare that man lives by bread alone, or that his spirit is fed only by abstract ideals. It is not for nought that ancient civilisations dedicated the choicest treasures of their mines to the glory of God, to their Saints and their holy men. It used to be said in Italy that the derivation of *diamante* was *amante di Dio*, lover of God, and for long it was held, in ages when ghosts and spectres were believed in, that a diamond worn at night would keep them away. Orientals doubtless saw in the glittering rays of the stone a likeness to the Sacred Lotus, and the tiara, so familiar to fashion nowadays, carries on this idea of resemblance between flower and gem, for is not a tiara a crown of glorious and unfading petals that enhances the beauty of the features, gives dignity to the presence, and bestows majesty on the human form. From earliest times diamonds have always been associated with human success and prosperity, and whether they have glorified a god, magnified a monarch, or adorned a beloved, the purchase or possession of them has been accepted as signifying power. The diamond, too, has been esteemed a symbol of happiness, as well as an emblem of purity of life, and no more fitting conclusion to these chapters on the king of jewels could be given than by quoting this passage from a Buddhist poem called *The Questioning of King Melinda*:

"O King, as the diamond is pure throughout, so, O King, should the sincere man of virtue, constant in right endeavour, be ever pure in his manner of living. This, O King, is the first quality of the diamond he ought to have. Again,

O King, as the diamond cannot be alloyed with inferior substance, so, O King, should the sincere man of virtue, constant in right endeavour, never mix in friendship with wicked men. This, O King, is the second quality of the diamond he ought to have. Again, O King, as the diamond is only set about with the most costly jewels, so, O King, should the sincere man of virtue, constant in right endeavour, only associate with men of highest excellence. This, O King, is the third quality of the diamond he ought to have. For it was said, O King, by the Blessed One, Buddha :

Let the pure mix only with the pure
Ever in memory firm
Dwelling in the harmony of wisdom
Thus shall ye put an end to sorrow."

CHAPTER IV

The Pearl

*She is mine own
And I as rich in having such a jewel
As twenty seas, if all their sand were pearl
The water nectar and the rocks pure gold.*—SHAKESPEARE.



HIS impassioned rapture of a Shakesperian lover sounds the keynote of all that can be written on pearls. They are the jewels of love, and women have always rejoiced in them. If the diamond be the king, then is the pearl queen among jewels. Few legends, good or evil, cling to particular specimens. There are, of course, the pearls which Cleopatra dissolved in vinegar and drank from a golden goblet—an expensive and slightly vulgar form of ostentation. Moreover, for a Queen of Egypt it meant little, and the jewels themselves—they have from earliest times been known as the jewels of chastity—were inappropriate in such a regal comedy.

Here is a passage from one of the earliest writings extant, a hymn of the Jains, a Hindu sect that flourished five or six centuries before Christ. It is addressed to the goddess Sri, whose loveliness exceeded all human loveliness.

On all parts of her body shone ornaments and trinkets composed of many jewels and precious stones, yellow and red gold. Her pure cup-like breasts sparkled, enriched by a garland of jasmine flowers in which glittered a string of pearls. She wore strings of pearls made by clever and diligent artists, strung with wonderful strings, and a trembling pair of earrings touching her shoulders diffused brilliancy; but the united beauties and charms of these pearls and ornaments were only the servants of the loveliness of her face.

It is a far cry from a Jain goddess to an eighteenth century English Divine, yet we find much the same thought present in this

THE EGLINTON BLACK PEARLS

This famous necklace, formerly in the possession of the Earls of Eglinton, is composed of six magnificent black pearls, each set in a cluster of brilliants, and connected by chain-pattern links of brilliants.

The property of Lady Weigall.



Hindu hymn as in that often quoted passage of Bishop Hall: "Moderation is the silken string running through the pearl chain of all virtues." Strings of pearls (or ropes of pearls as we call them nowadays) have always fascinated the human mind, nor can anyone familiar with these exquisite necklets be surprised, for each gem is the same, yet each different with an individuality of its own, a charm neither greater nor less than its neighbours, but peculiar to itself, its very own. One understands what that French poet of the sixteenth century, Du Bartas, meant when he speaks of love changing "the pebbles of puddly thought to orient pearls." An ancient Indian myth recounts the offerings which were made by the elements as gifts worthy of the Supreme Deity. The rainbow was the offering of Air, a meteor was the gift of Fire, Earth contributed a ruby, and the Sea a pearl. The rainbow formed a halo about the god, the meteor served as a lantern to his feet, the ruby decorated the forehead, the pearl was worn above the heart.

Many theories have been advanced to account for the marvelously pure lustre of the pearl, some a trifle extravagant. Its resemblance to the dew of heaven or to the first rays of dawn puzzled the generations of men, both East and West, a resemblance which Milton immortalised in *Paradise Lost*:

Now morn, her rosy steps in th' eastern clime
Advancing, sowed the earth with orient pearl
When Adam waked.

A common legend was that at certain seasons of the year the pearl oysters rise to the surface of the sea in the morning, and opening their shells imbibe the dew-drops. These dewdrops, aided by the breath of the air and the warmth of the sun are, in course of time, transformed into lustrous pearls; but if air and sunlight are not received in sufficient quantities, the gems do not attain perfection and are faulty in form, colour and lustre. This opinion was recorded in the Sanskrit books of the Brahmans, and in other Oriental literature. The classical and mediæval writings of Europe contain numerous references to it; and it is found even yet in the traditions and folklore of some peoples.

In the first century A.D. Pliny wrote in his *Historia Naturalis*, according to Dr. Holland's quaint translation:

The fruit of these shell fishes are the Pearles, better or worse, great or small, according to the quality and quantitie of the dew which they received.

For if the dew were pure and cleare which went into them, then are the pearles white, faire and orient; but if grosse and troubled, the pearles likewise are dimme, foule and duskish; pale they are if the weather were close, darke and threatening raine in the time of their conception. Whereby it is apparent and plaine, that they participate more of the aire and the sky, than of the water and the sea; according as the morning is faire, so are they cleere; but otherwise, if it were misty and cloudy, they also will be thicke and muddy in colour. If they may have their full time and season to feed, the pearles likewise will thrive and grow bigge: but if in the time it chance to lighten, then they close their shells together, and for want of nourishment are kept hungrie and fasting, and so the pearles keepe at a stay and prosper not accordingly. But if it thunder withall, then suddenly they shut hard at once, and breed only those excrescences which be called *Physemata*, like unto bladders, puft up and hooved with wind, no corporal substance at all: and these are the abortive and untimely fruits of these shell fishes.

This was the theory advanced to account for the lustrous spherical pearl, for the baroque or grotesque pearl—that is the pearl of irregular shape and indifferent colour—and for the so-called “blister” pearl. In the twelfth century much the same beliefs prevailed, for the Spanish Jew, Benjamin of Tudela, a great traveller, wrote in his book on Persia, referring to the pearl fisheries at the head of the Persian Gulf: “In places pearles are found made by the wonderful artifice of nature: for on the four-and-twentieth day of the month Nisan, a certain dew falleth into the waters, which being sucked in by oysters, they immediately sink to the bottom of the sea; afterwards about the middle of the month Tisri, men descend to the bottom of the sea, and, by the help of cords, these men bringing up oysters in great quantities from thence, open and take out of them the pearls.” The idea that rain or dew in some mysterious manner was responsible for pearls still persists in the East, for in recent years the Arab fishermen at Aden have accounted for the then scarcity of pearl oysters in the Red Sea by the absence of rain. The American Consul at Aden wrote: “There is a belief among these fishermen that a pearl is formed from a drop of rain caught in the mouth of the pearl oyster, which by some chemical process after a time turns into a pearl; and as there has been very little rain in that region for several years past there are few pearls.”

Now, extravagant as these various theories may appear to the Western mind, it would be foolish to dismiss them merely as

myths. The idea of an oyster being able to rise from his bed-rock to the surface and suck in dew or rain drops seems on the face of it to be as ludicrous as though it were reputed to sing like a nightingale, for no living creature could appear to the casual observer more immobile than the oyster. Yet it has been established scientifically that pearl oysters are migratory, that they do actually leave their beds and withdraw to unknown regions in certain years much in the same mysterious way as shoals of pilchard move from sea to sea. It is possible that these migrations, which have been noted off the coasts of Ceylon and Southern India, have an indirect connection with shortage or excess of rain-fall in those regions, and the observant native fishermen have perceived this. As far as the writer is aware no reason has yet been established for these extraordinary migrations of molluscs.

It is worthy of remark here that the association of pearls with dew or rain never occurred in Central America, where there are pearl fisheries possibly as old as those of Ceylon or the Persian Gulf. A different formula was propounded for their origin. Urbain Chauveton, in his edition of Girlando Benzoni's *Historia del Mondo Nuovo* published at Geneva in 1578, thus refers to pearl-oysters on the Venezuelan coast :

Around the Island of Cubagua and elsewhere on the eastern coast are sandy places where pearl-oysters grow. They produce their eggs in very large quantities, and likewise pearls at the same time. But it is necessary to have patience to let them grow and mature to perfection. They are soft at the beginning like the roe of fish; and as the mollusc gradually grows, they grow also and slowly harden. Sometimes many are found in one shell, which are hard and small, like gravel. Persons who have seen them while fishing say that they are soft as long as they are in the sea, and that the hardness comes to them only when they are out of the water.

Such are some of the legends of this gem. The true origin of the pearl is due to a parasite round which a nacreous substance forms. The Chinese discovered centuries ago that pearls could be formed by introducing a foreign substance into a nacre-forming mussel. They would fashion tiny images of Buddha in tin or lead, introduce them gently into a shell of the living mussel, and a few years later the mussels would be removed, and the miniature Buddhas, now coated in pearl, sold as amulets. The fresh-water pearls of China have been known from immemorial time: centuries ago a certain percentage had to be given to the State as a tax or tribute.

The fresh-water pearls of the British Islands have also a historical interest, and were familiar to the Romans, possibly to the Phœnicians. They, too, come from mussels, not from oysters. They have a beauty of their own though they lack the clear orient of the oyster-pearl, but set in gold they are effective. British pearls are among our Crown Jewels; perhaps the most famous being the one found in the Conway, the river of North Wales, which was presented by Sir Richard Wynn to Katherine of Braganza, the Queen of Charles II. The river Irt in Cumberland has long been celebrated for its pearls. William Camden wrote when Elizabeth was Queen: "In this brook (the Irt) the shell-fish eagerly sucking in the dew conceive and bring forth pearls, or to use the poet's word, shell-berries." Here we have the dew theory alive in Cumberland.

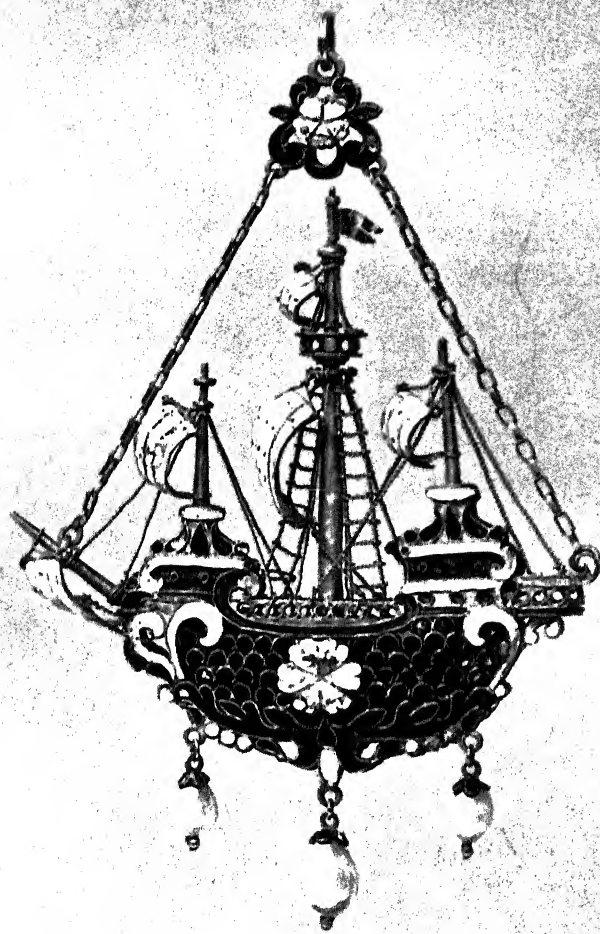
The true pearl comes from two oysters, closely allied but of different species. The smaller mollusc *margaritifera vulgaris* is only found off the coasts of Ceylon and Southern India, the larger species *meleagrina margaritifera* is widely distributed, occurring in the Persian Gulf, Madagascar, the west coast of Central America, California, and West Australia. From the *meleagrina* mother-of-pearl is obtained. The Ceylon fisheries are the most famous in the world, though the Persian Gulf yields fine gems. Bombay pearls, of which one sometimes hears, are those from the Persian Gulf, so called because Bombay is the market to which they are first taken. Many jewels from this fishery have in past times found their way to Europe through the bazaars of Persia and Bagdad. But for fine pearls, no matter what fishery may produce them, the chief market in the world to-day is London. Hither are brought all the choicest specimens, and it is in London that the lover and collector of pearls, coloured or graded, seeks his choice.

It has been said that it takes twenty years to form a perfectly modulated rope of pearls, each one just one size smaller than the other. It means of course that after the first egg-pearl that forms the centre, there must always be two of an exact size running through all the gradations. The collection of pearls often becomes a hobby of wealthy men and women, a hobby of which they never tire to the end of their lives. This is easily understood by anyone who has ever held in his hand many pearls.

At one time it was thought each pearl had a life of its own: not only life but a separate constitution of its own, so that at times

A SIXTEENTH CENTURY VENETIAN
PENDANT OF ENAMELLED GOLD

The jewel is formed of a crescent-shaped "carvel" built up high at the prow and stern, with three masts and five white-enamelled sails, and with rigging of twisted gold wire; the hull is covered with an imbricated and floral pattern in translucent blue, red and green, and opaque white enamels. The rosette from which the ship hangs is of similar colours, and the three pendent pearls are mounted with enamelled caps.



some would go sick, lose colour, and assume a dead white. Presently, just as in their wearer, health would be restored, and they would shine more lustrously than before. There is no doubt that pearls require to be very carefully tended, and that it is always well, as an act of precaution, now and again, to consult pearl doctors concerning them; that is to say, jewellers who have made a close study of the gem, so as to be sure that no noxious substance, visible possibly only under a strong microscope, clings to them. They should be worn constantly, for the contact of the skin preserves and quickens the orient.

It is a slight but interesting episode in the history of this jewel that it should have bestowed a new meaning on this word. The Orient, in its primary sense, means the East, "the place where the sun rises." It was first applied to the pearl by poets to signify the light of dawn, the soft hues of sunrise that they beheld on its surface; "orient" in this sense gradually passed into current use, and now possesses an exact meaning when applied to pearls.

While the pearl of ordinary lustre suggests the dawn, coloured pearls recall the wonderful hues of a tropical sunset. It is possible to dye pearls, but the true pearl of colour, which is rare, and greatly prized, has tints such as one never sees in material substance, except perhaps in the choicest silks of China. A quarter of a century ago the writer was shown a wonderful collection of coloured pearls that was being made for an Indian Maharajah. There were over a score, each one of a different hue, of palest pink, softest mauve, and of shimmering tints one sees on the neck-feathers of a dove. The collection was not complete; but even to-day that sight is still a happy remembrance, and never since that hour has the writer watched the waves of a western sea being touched to the most delicate shades of colour by the declining sun without his mind reverting to that collection of coloured pearls.

The beauty of pearls is not to be traced to their origin; it exists in the excellence of the surroundings in which they develop. Pearl-bearing molluscs are luxurious creatures, and for the purpose of protecting their delicate bodies they cover the interior of their shells with a smooth lustrous material dyed with rainbow hues, and possessing a beautiful opalescence. No matter how foul, how coral-covered, or overgrown with sponges or seaweeds the exterior may be, all is clean and fair within. This material is nacre or mother-of-pearl. It consists ordinarily of an accumulation of

THE ROMANCE OF THE JEWEL

extremely thin semi-transparent films or laminae of a granular organic substance known as conchiolin, with the interstices filled with calcareous matter. The nacre decreases in thickness from the hinge towards the lip of the shell, and terminates a short distance from the extreme edge.

Underlying the nacre is the middle layer of the shell proper. In one species of *margaritifera*, this stratum is usually formed of layers of calcareous prisms arranged vertically to the shell surface. Outside this middle or prismatic layer is the epidermis or periostracum, the rough outer coating of varying shades, generally yellow or brown. Where the waves are rough, and the bottom of the ocean hard and rocky, this covering is thick and heavy, to afford greater protection; but where the waters are smooth and gentle, and the bottom free from rocks, Nature furnishes only thin sides and slight defence. As is the case with the nacre, the prismatic layer and the periostracum decrease in thickness from the hinges to the edge, and the inside lip of the shell shows the gradual union of the three superimposed layers. The two outer layers are formed by the thick edge of the mantle, the remaining portion—or nearly the entire surface—of this organ secretes the nacral layer.

Not only is the shell interior made lustrous and beautiful, but this tendency is exerted over all objects that come in contact with the soft body of the oyster, either by intrusion within the shell, or deeply within the organs and tissues of animal itself. All foreign bodies, such as minute parasites, or pebbles, irritate the oyster's tender tissues, and stimulate the pearly formation which in course of time covers them.

The distinctive characteristic of a true pearl, of course, is its lustre, or subdued iridescence. Unless the shelly growth be lustrous it does not rank as a gem pearl, no matter how perfect its form or beautiful its colour. This lustre is due to the structural arrangement of the surface as well as to the quality of the material. The nacreous material forming true pearls is commonly deposited in irregular tenuous layers, very thin and very small in area compared with the surface of the pearl. These laminae overlap one another, the surfaces are microscopically crumpled and corrugated, and the edges form serrated outlines. The greater the angle which the laminae form with the surface the closer will be these serrated outlines, and where the plane of the exterior laminae is parallel with

A PAIR OF PERSIAN EAR-RINGS
of enamelled gold

Each ear-ring is formed of two dome-shaped pendants, richly painted with floral designs in coloured enamel and fringed with rows of pearls and gold leaves ; above is an enamelled bird hung with pearls.



the plane of the surface the lines are not present. This arrangement causes the waves of light to be reflected from different levels on the surface, just as in a soap bubble, and the minute prisms split the rays up into their coloured constituents, producing the iridescent effect.

Perfectly spherical pearls range in weight from a small fraction of a grain to three hundred grains or more, but it is very rare that one of choice lustre weighs more than one hundred grains. During its growth the perfectly rounded pearl may come in contact with a foreign body, such as grit or a vegetable film, and the additional nacre layers envelop the adjacent matter until it is entirely concealed within the pearl, its position being recognised only by the excrescence on one side, and, with continued increase in size, even this may be almost overcome. Sometimes double, triple, or multiple pearls are formed; each of these may have a separate nucleus, and grow independently for a time until they adjoin each other; continuing to grow, they become so united as to form a connected mass. The famous "Southern Cross," which was found in Western Australia, is a remarkable example of this. It appears to consist of seven nearly spherical pearls attached to one another in a straight line, and one projecting from each side of the second in the row, thus forming a Roman Cross.

"Errors like straws upon the surface flow
He who would search for pearls must dive below."

So wrote Dryden. To-day, just as when the gods walked the earth and adorned their brides and lovers with the treasures of man, the pearl-fisher must leap overboard and tear by hand from the secret rocks the "gem of purest ray serene." His work is doubly perilous because of "the tiger of the ocean"—the man-eating shark. It is in the spring of the year when pearl-fishing takes place off the coast of Ceylon. The weather is then settled. Out of the mists of dawn the pearl fleet sails to its station above the reefs. At a signal, diving begins. The diver, with a rush basket tied to his waistbelt, and sharpened spikes of ironwood stuck into it as a defence against sharks, swings himself overboard, holding to a rope to which a heavy block of stone is tied. A companion lowers the rope and at a signal pulls it in. A diver will stay one or two minutes below water, and the story goes that expert divers can train themselves to do without breath for as long as six minutes at a stretch. After a time the

THE ROMANCE OF THE JEWEL

companion changes about, for pearl divers always work in couples. The day finished, sail is set for the shore, where pearl merchants await the fleet. The oysters are piled in heaps of a thousand, one heap out of every four being the divers' wage, and are sold by auction. Buying pearl-oysters in the shell is possibly the biggest speculation there is in lawful commerce, and hardly a season passes without its romance of a great find.

"Again, the kingdom of heaven is like unto a merchant man, seeking goodly pearls: who, when he has found one pearl of great price, went and sold all that he had, and bought it." This passage from St. Matthew describes what actually happens when the original merchants return to Colombo and Bombay. The report of "a pearl of great price" is quickly noised abroad, and goodly pearls are for the moment neglected if only this prize can be obtained.

When the oysters are landed on the beach they are piled in heaps. Putrefaction quickly sets in, and it is from this horrid mass that the gems are washed out. The pearls are then passed through brass sieves, or "baskets" as they are called, and roughly sized. In Western Australia dredging has been tried, but the work is wasteful, and it seems probable that diving will continue to the end to be the means of gaining the gems. A pearl oyster is said to be at its best in its fifth year, though some put this period three years later.

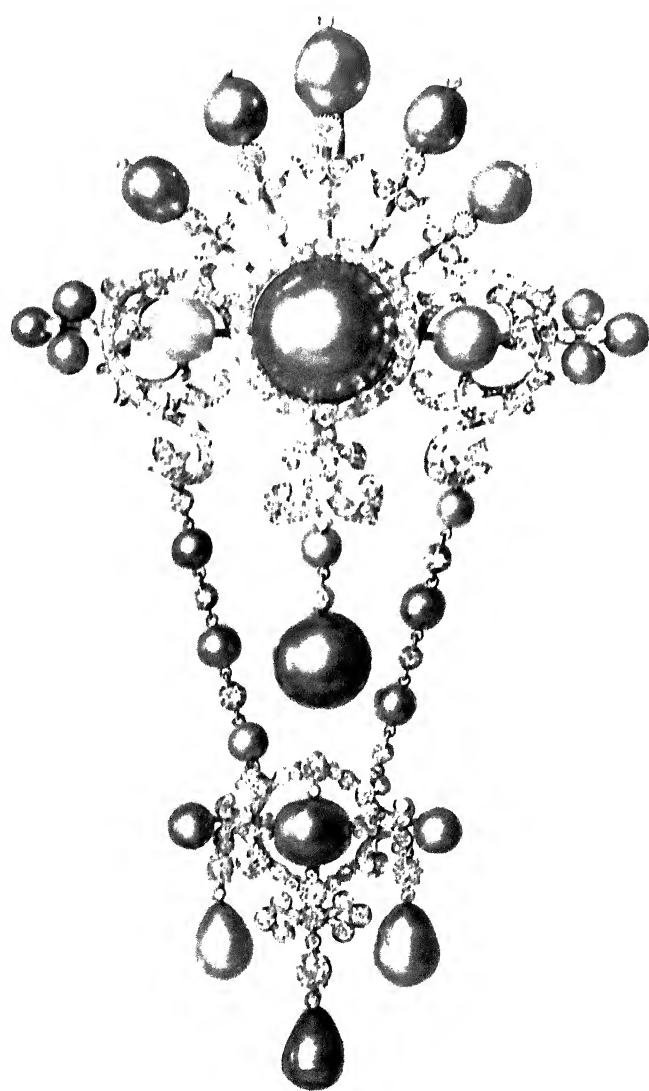
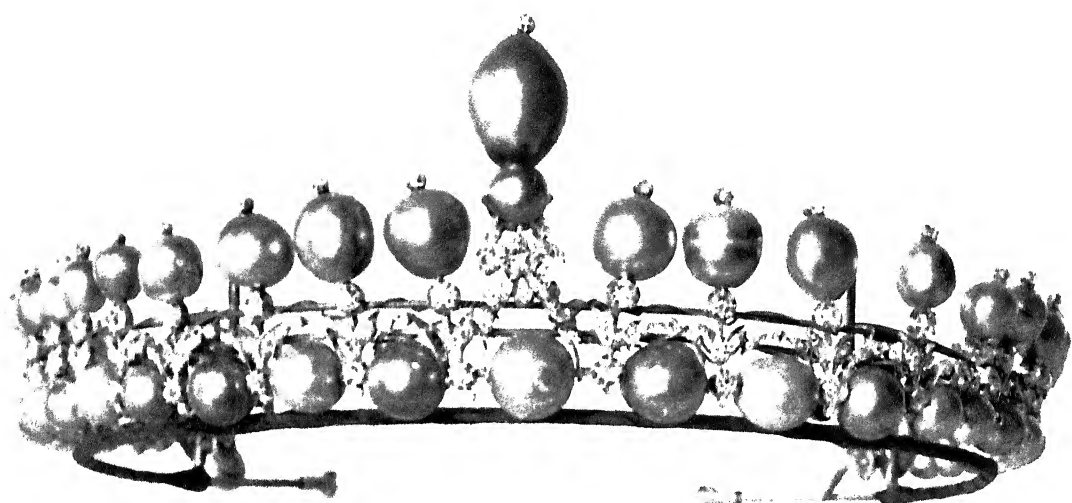
Pearls as ornaments were at the height of their fame during the Roman Empire. Caligula and Nero revelled in these gems. Pliny remarked that the wealthy were so pearl-bedecked that "it is not sufficient for them to wear pearls, they must trample and walk over them." In Imperial Rome a sumptuary law was passed, forbidding pearls to be worn below a certain degree in rank. Martial gives a very human touch, when he describes a famous beauty: "By no gods or goddesses does she swear, but by her pearls, which she embraces and kisses; they are her brothers and her sisters." The famous Stilicho pearls go back to Imperial Rome, but at a later date. The daughters of the Roman General Stilicho were successively betrothed to the Emperor Honorius; they died in A.D. 407, and were buried with their pearl ornaments. In 1526, or more than eleven centuries afterwards, in excavating for an extension of St. Peter's, the tomb was opened, and the ornaments were found in fair condition, except the pearls, which were as lustreless and dead as a wreath of last year's flowers.

TIARA OF BLACK PEARLS

This remarkable ornament is composed of a double row of black pearls of unusual size and quality, mounted with diamonds; a great oval pearl occupies the centre,

BREAST ORNAMENT OF BLACK PEARLS

The centre is occupied by a black bouton pearl of exceptional size, from which is hung a perfectly spherical pearl; the rest are oval, spherical, and pear-shaped; the remainder of the ornament is composed of brilliants,



In the Musée Cluny, in Paris, there is a wonderful pearl and sapphire cross which was found in Spain sixty years ago. It has been identified as the cross that was attached as a pendant to the crown worn by the Gothic King Reccesvinthus, who reigned in the seventh century. In the Dark Ages pearls were largely used for the decoration of missals and breviaries, and there are wonderful specimens of this glorious work in existence, in which the jeweller had turned bookbinder, or the bookbinder jeweller. The Crusaders brought home pearls with them from the East, especially after the sack of Alexandria. It is only in the fourteenth century that the word pearl, or perle, as it was first spelt, came into use. It is probably derived from the Latin *pirula*, meaning "little pear," which would be a true enough description of the usual baroque. Before then this gem was called by its Greek term margarite, and one is inclined to regret that margarite became obsolete, for it is undoubtedly a prettier word than pearl. Wycliff in his Bible speaks of margarites, where in the Authorised Version the word pearl is used.

It was the custom in old times for princes and great nobles to carry their valuables about with them, even on battlefields, in order to have them always in possession, and partly on account of the mysterious power they attributed to precious stones. A stringer or threader of pearls was a common figure in the retinue of a prince. His job was no sinecure. When Charles the Bold, Duke of Burgundy, in 1473 attended the Diet of Treves accompanied by his 5000 splendidly equipped horsemen, he was attired in cloth-of-gold garnished with pearls, which were valued at 200,000 golden florins. Two years later, at the marriage of George the Rich with Hedwig, the daughter of Casimir III. of Poland, it was remarked that "almost a sea of pearls was exposed to view." Among the Duke's many ornaments was a pearl chaplet, valued at 50,000 golden florins, which he wore on his hat.

There is at Holyrood a portrait, painted in 1483, of Margaret, wife of James III. of Scotland, which depicts this Queen wearing such wonderful pearl ornaments that she might well have been called "Margaret" after them. Henry VIII., again, was a great lover of pearls, and in the portraits of his wives necklets of this gem often occur. Towards the end of Elizabeth's reign, the Republic of Venice instituted a Pearl Controller, and practically rationed them, for a resolution in the Senate dated July 8th, 1599, set forth that "the use and price of pearls has become so excessive

and increases to such an extent from day to day, that if some remedy is not provided it will cause injury, disorders, and notable inconvenience to public and private well being, as each one of this council in his wisdom can very easily appreciate." So was enacted the following sumptuary law:

"That, without repealing the other regulations which absolutely prohibit the wearing of pearls, it should be expressly enacted, that any woman, whether of noble birth or a simple citizen, or of any other condition, who shall reside in this our city for one year, except Her Majesty the Doña Juana and her daughters and her daughters-in-law who live in the palace, after the expiration of fifteen years from the day of her first marriage, shall lay aside the string of pearls around her neck and shall not wear, on her, either upon her neck or upon any other part of her person, this string or any other kind of pearls or anything which imitates pearls, neither in this city nor in any other city or place within our Dominion, under the irremissible penalty of two hundred ducats."

Ten years later another pearl restriction law was passed by the Venetian Senate with stronger penalties, which included banishment. All persons who had pearls to dispose of were required to leave a descriptive list of them at the State Sumptuary Office, so as to avoid all fraud which could be practised in this matter. Many fine distinctions were drawn by the lawyers of that day regarding ownership. For instance, it was decided that pearls given by a father to his unmarried daughter remained her property after marriage, because "they are given for a reason, namely, to induce marriage", yet "pearls handed to a wife by her husband are not considered as her property, but must be given to his heirs, since it is supposed that they were given only for her adornment. The same holds good in respect to pearls handed to a daughter-in-law by her father-in-law."

In 1612 Duke John of Saxony decreed that "the nobility are not allowed to wear any dresses of gold or silver, or garnished with pearls; neither shall the professors and doctors of the Universities, nor their wives, wear any gold, silver or pearls for fringe, or any chains of pearls, or caps or neck ornament, shoes, slippers, haws, pins, etc., with gold or silver or with pearl." In the sixteenth and seventeenth centuries people were apt to put their fortunes on their persons, as natives do still in less civilised regions. Beadles, burgomasters, and those connected with the law courts were forbidden to wear chains of pearls, or slippers or chaplets with pearls.

Just two more historical instances of the extravagant wearing of pearls may be given. When the Duke of Buckingham went to Paris in 1625 to bring over Henrietta Maria to be Queen of Charles I., then Prince of Wales, he had, according to the *Antiquarian Repertory*, besides twenty-six other suits, "a rich suit of purple satin, embroidered all over with rich orient pearls, the cloak made after the Spanish mode, with all things suitable, the value whereof will be £20,000, and this, it is thought, shall be for the wedding-day at Paris." Possibly the splendour and good looks of the Ambassador brought off the match. A contemporary description of the coronation of George II. and Queen Caroline in Westminster Abbey in October, 1727, mentions that the Queen wore, not only the great pearl necklace inherited from Queen Anne, but "had on her head and shoulders all the pearls she could borrow of the ladies of quality at one end of the town, and on her petticoat all the diamonds she could hire of the Jews and jewellers at the other: so that the appearance and the truth of her finery was a mixture of magnificence and meanness."

To judge from the wealth of the jewels found by the Spaniards when they conquered Mexico and Peru, pearl fisheries must have existed for ages off the west coast of Central America. The palace of Montezuma was studded with emeralds and pearls, and, to use a phrase of an old chronicler, when these adventurers returned to Spain from their American *El Dorado* "pearls were to every man like chaff." For many years America was known to the lower orders in the big cities of Spain as "the land whence came pearls."

The actual pearl earrings which once belonged to Marie Antoinette are still in existence in private possession in America. The story is an interesting one of how these jewels were safely handed down through four generations by the female descendants of the Royal House of France. It would appear that Marie Antoinette in parting with the few of her personal belongings that remained to her not long before her execution, gave her pearl earrings to her youthful daughter Marie Thérèse Charlotte. During the period after her mother's death, when the Princess remained, together with her aunt Elizabeth Philippine, imprisoned and apparently forgotten by the government, the earrings were carefully preserved. In 1794 Elizabeth was condemned to death and guillotined, but Princess Marie's life was spared, and in the following year she was given over to the Austrians, and in 1799 was married to her cousin Louis Antoine, Duke of Angoulême, eldest son of Charles X. of France. No issue resulted from this union, and the

Duchess, anxious to keep treasures so peculiarly associated with her mother in the Bourbon family, gave the earrings to her niece Louise de Bourbon, daughter of her cousin and brother-in-law Charles, Duke of Berry, who was assassinated in 1820, a year after his daughter's birth. This Princess, who in 1845 married Charles III. de Bourbon, Duke of Parma, died in 1864, and bequeathed the pearls to her only daughter, Alice de Bourbon, wife of the Archduke Ferdinand IV. of Austria, Grand Duke of Tuscany. Her Royal Highness the Grand Duchess Alice in turn gave the earrings to her daughter, and she in May, 1906, sold them at Christie's, where they realised the sum of £550. The earrings, which are a perfect pair, are composed each of a huge pear-shaped pearl of fine orient, with a bouton pearl top. The bouton is surrounded by brilliants; while the pearl drop is clasped about its smaller end with diamond work in trefoil and scroll-work patterns.

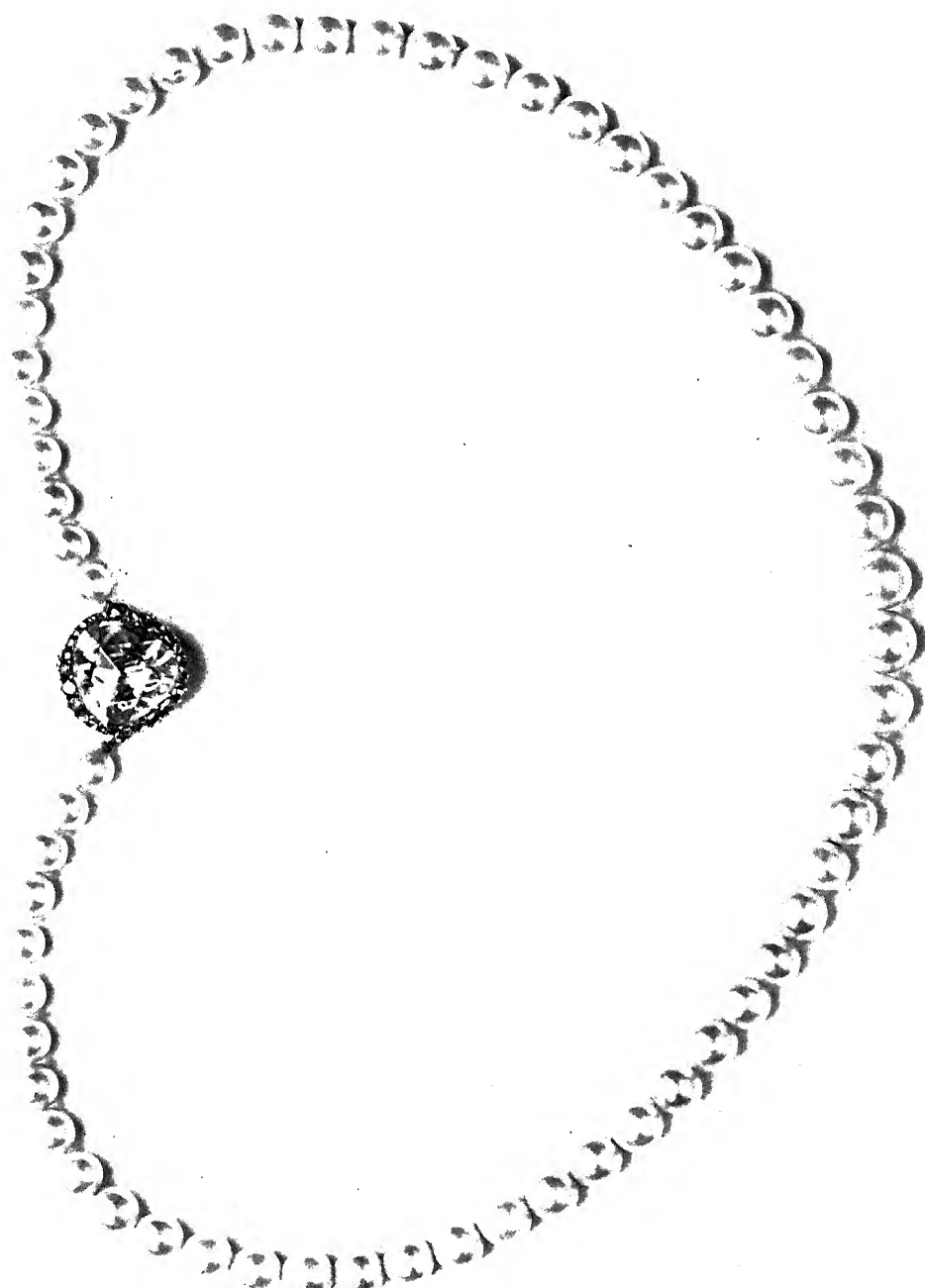
Perhaps the most stirring jewels of the centuries are the beautiful pearls which the women of the Empire lavishly offered up for the Red Cross work in the Great War, and which formed no less than thirty exquisite strings of gems. The finest consisted of a single row of lustrous Orient pearls of large size. Its snap composed of a large rose diamond had a touching history of its own. Offered by Lady Norbury in memory of her brother, this diamond was an heir-loom. It belonged originally to Lady Norbury's great grandmother, wife of the Duke of Portland, and was inherited through her aunt, the late Duchess of Sermoneta. The historical and emotional interest attaching to these famous Red Cross Pearls, sold at Christie's, is unique. Most of them were given in memory of a fallen son, husband, or brother. They have been appositely described as "tears transformed to orient pearls." Many of the donors gave the most precious pearl in their jewel case. It was a beautiful idea, triumphantly carried out, and aroused the deepest sympathy throughout the world.

In the seventeenth century, a Shah of Persia is reported to have given a sum of money the equivalent of £58,000 for a single pearl from the Persian Gulf, but all the stories of great pearls are more or less doubtful. Particular gems have never had names attached to them, like diamonds, nor is it to be wondered at, for the charm of the pearl lies far less in its size than in its singular suggestion of primal innocence and mystical grace. There is no jewel to equal it in this respect. The father who places a string of pearls on the neck of his young daughter, even if it be only of seed pearls, makes use of a

THE RED CROSS PEARL NECKLACE

Comprised of sixty-three finely matched and slightly graduated pearls of the finest Orient, the snap formed of a large rose diamond surrounded by small diamonds. Selected from the collection of pearls presented by the Women of the Empire to the British Red Cross Society and the Order of the Hospital of St. John of Jerusalem in England for the benefit of the sick and wounded during the Great War.

This magnificent necklace was sold at Christie's in December, 1918, and realised £22,000.



beautiful symbol in a gesture of profound significance. A woman who desires a perfect pearl is neither avaricious nor covetous ; she is only moved by a strong desire for one of the loveliest creations on this planet, one which has always stirred the mind to great thoughts. When, in the Apocalypse of St. John the Divine, the twelve gates of the New Heaven are described as "twelve pearls, every several gate of one pearl," it is merely the expression of an immortal truth that the pearl is an uplifter of character, a portal through which men and women have found their way to a new heaven. Butler must have had this idea in mind when in his *Hudibras* he wrote :

"For truth is precious and divine,
Too rich a pearl for carnal swine."

And in Emerson's beautiful lines we have the same thought expressed :

"Give the pearl which dims the moon
To the noblest or to none !"

CHAPTER V

The Ruby

"But where shall wisdom be found? And where is the place of understanding? It cannot be valued with the gold of Ophir, with the precious oys of the sulphure. No mention shall be made of coral, or of pearls: for the price of wisdom is above rubies." The Book of Job.



THE ruby has pride of place among jewels. In books on gems, several hundred years old, it is recorded that "the clear and fine ruby is the lord of stones, the gem of gems, superior in virtuous qualities to all other stones." It is called "the most precious of the twelve precious stones God created when He created all creatures." It is spoken of as the "lord of jewels, the highly prized, the dearly beloved ruby, so fair with its gay colour." There is a fourteenth century treatise, attributed to Sir John Mandeville, in which the owner of a perfect ruby is assured of a peaceful life: "Neither his lands, nor his possessions, nor his rank, nor his personal property, will ever be in peril, and the stone will guard his house, his fruit-trees and his vineyards from tempestuous storms." All the good things of life, it is elsewhere declared, are more surely secured if the ruby, set in ring, bracelet or brooch, be worn on the left side.

There is no more singular fact in the annals of the lapidary than the unvarying favour which, through all the centuries, has clung to the ruby. Neither evil legend nor malign influence has ever attached itself to the blood red stone, though red, to Western minds, has come to signify danger, revolution, and ungovernable fury. But the ruby has always been held to be a strong and virile power for good, and real jewel lovers for whom gems have a significance apart from their brilliance and value, always take care that the "dearly

JEWELS FROM THE TREASURY OF THE
MOGUL EMPERORS OF INDIA AT DELHI

Acquired in India at the time of the Mutiny and formerly in the celebrated Guthrie Collection. These beautiful seventeenth century jewels are formed of white jade, inlaid with gold, and set with precious stones.

Spoon from a princess's
toilet box, inlaid with
emeralds and rubies.

Amulet (*Tawiz*)
jewelled with
carved rubies and
emeralds.

Turban-ornament (*Sarpesh*)
set with carved rubies and
emeralds, and white diamond
lasques over gold foil ; with
pearl drop.

Necklace Pendant (*Latkan*)
jewelled with rubies and
emeralds ; with large
emerald-bead drop.

Buckle from a
sword-belt, set
diamonds, rubies,
and an emerald.



beloved ruby, so fair with its gay colour," is to the fore in their jewel cases.

It is common knowledge nowadays that a really good ruby is the most expensive of stones, but when Job, in the passage quoted at the head of this chapter, put the price of wisdom above rubies, and when Solomon declared that the price of a virtuous woman is "far above rubies," these Hebrew writers had in their mind the nobler and finer qualities of the gem. The Hindus, probably long before Job or Solomon, had exalted the ruby above all gems; they believed that a spark of heavenly flame burned in the stone—living fire which nothing could quench, and which could not be hidden, for it would shine through every wrapping, even the raiment of man being impotent to conceal it. The dark and star rubies were termed male by writers of old times; those of paler colour female, but all equally were regarded as efficient to protect the health of the wearer, for they removed evil thoughts from the mind, controlled the amorous desires of the heart, dissipated poisonous and pestilential vapours, and reconciled quarrels between lovers and friends.

Rubies, like diamonds but these two stones alone—were divided by the Hindus into five castes. To the highest, or Brahmin caste, belonged the Burmah stone, and to the lowest, or Sudra caste, the red spinel, thus proving once again the curiously correct knowledge of the exact value of precious stones which prevailed in the antique East, ages before Western science had arrived at the same facts by careful and prolonged investigation. As we have said before, Eastern esteem of precious stones, encompassed though it is with legends, and overlaid with much imaginative fiction, is in its origin a much truer guide to the value of jewels than the ordinary Western notions, which, too often, see in them merely an easy means of ostentation, and entirely fail to appreciate the joy and beauty which abides in these glittering pieces of exquisite colour. They are things of beauty which man may as lawfully enjoy as he does any of the other fruits of the earth. To quote Job once more: "As for the earth, out of it cometh bread, and under it is turned up as it were fire."

There was a time when precious stones were believed to possess medicinal virtues, and it is of interest to know that a powdered ruby was in these days considered a certain cure for affections of the stomach—a remedy so costly as to be only within the means of multi-millionaires! In the sixteenth century, when Ivan the Terrible was Tsar of Russia, he, too, shared the common opinion that jewels

THE ROMANCE OF THE JEWEL

possessed curative powers. Sir Jerome Horsey, an envoy of Queen Elizabeth, was invited by the Tsar one day to his treasure-chamber, and Horsey afterwards made the following notes: "He poyntz at the ruby and says: 'O this is most comfortable to the hart, braine, vigor and memorie of man, it clarifies congelled and corrupt bloud.'" In this connection, too, we may recall the story of a Chinese traveller and writer who flourished in the thirteenth century. He had been at the court of the King of Ceylon, who owned a wonderful ruby: "The king holds in his hand a jewel five inches in diameter, which cannot be burned by fire and which shines in the night like a torch. He rubs his face daily with this jewel and it restores to brow and cheek the bloom of youth. Though he live to more than ninety, yet by the touch of this ruby he is as though he were twenty." So we see that the secret of youth, renewed by simple means, is one of the oldest and most widely spread of legends, and it only adds to the many beneficent qualities assigned to the ruby—which is "as it were fire"—that it should be possessed of this magic charm.

The romantic legend that the ruby was luminous lingered until quite recent times; indeed, science has proved that corundum, the substance of the true ruby, is capable of absorbing phosphorescent rays and giving them forth, but not to the extent which legend asserts. In the eighth century, Hildegard, wife of Theodoric, Count of Holland, gave a wonderful ruby to the Abbey of Egmond, where the body of St. Adelbert, the patron saint of Egmond, rested. "This precious stone," we are told by pious scribes, "shone so brightly that when the monks were assembled in the chapel in the night time they could read the hours without any other light." But the jewel was stolen by a monk, whom the old chronicler calls "the most rapacious animal who ever went on two legs." After the theft he feared to keep the glowing gem, and threw it into the sea, where it was lost for ever.

Not only have rubies been assumed to give forth light but also heat, and it was reputed that a true gem of great worth would, if thrown into a vessel containing water, set the water boiling.

The ruby, in the time of the Borgias—when murder was a fine art—was regarded as an antidote of poison, and the stone was also thought to be possessed of prophetic powers, so that if the owner of it, or anyone dear to him, were threatened with danger, it lost its glow and burned dark and cloudy, but when the danger was past or fulfilled it resumed its former beauty. Such legends also lingered in

Germany, and a German writer of the sixteenth century tells this striking story:

On December 5, 1600, as I was travelling from Stutgard to Calwam, in company with my beloved wife, Catherine Adelmann, of pious memory, I observed most distinctly during the journey that a very fine ruby, her gift, which I wore set in a ring upon my finger, had lost, once or twice, almost all its splendid colour, and had put on dulness in the place of brilliancy, and darkness in the place of light: the which blackness and opacity lasted not for one or two days only, but several; so that being beyond measure disgusted thereat, I took the ring off my finger and locked it up in my trunk. Whereupon I repeatedly warned my wife that some grievous mishap was impending over either her or myself, as I forboded from the change of colour in my ruby. Nor was I wrong in my anticipation, inasmuch as within a few days she was taken with a fatal sickness that never left her till her death. And truly, after her decease its former brilliant colour again returned spontaneously to my ruby.

Here, for the moment, we bid farewell to legendary lore, and come to the less picturesque facts associated with this fascinating jewel. Everybody is familiar with the curious phenomenon that a single slope of a hill will produce a wine of a delicate and rare bouquet, which no other vineyard in the same neighbourhood or in any other region can equal. And again, that a particular valley in Cuba will grow a tobacco of choice aroma which can be equalled in no other spot. So is it in the mineral world with the best rubies. These have always been found in the Mogok Valley, in Upper Burma, a valley which is perhaps two miles long and of an average breadth of about half a mile. From this small tract have been produced all the best stones of the finest colour, and in former times one of the recognised titles of the Kings of Burma was that of "Lord of the Rubies."

In 1886, when Upper Burma became part of the Empire, the British Government took over the mines in this valley, and in 1889 leased them to the Burma Ruby Mine Company. For many years the company failed to pay expenses, but latterly, owing to the successful development of their mining operations, and a favourable alteration in the terms of their agreement, they were able to pay dividends, and have now good hope of a prosperous future. Early in this century a ruby was found by this company weighing over 70 carats. Its shape was elongated, and its colour wonderfully deep. On being cut, it weighed over 28 carats, and was valued at £6000.

Alluvial deposits are the ruby-bearing strata, and it is chiefly in the sand or gravel that the gems are found, though occasionally

in pieces of crystalline limestone, which is their original matrix. This gravel is brought down by the current of a river from some place higher up, and is to be found deposited in pockets along the Mogok Valley. It is on the pockets of gravel that the present system of mining is employed. The method is to sink shafts down to the ruby-bearing strata, or *byon*, which is the local name of the ruby earth or sand; it is found at depths of from fifteen to two-and-twenty feet below the top clay. When worked out these shafts are filled in again. The *byon* that has been brought from below is loaded on small trucks and taken to the washing machines. Here it is passed through sieves of graded mesh, under jets of water, the smaller stuff being carried on into rotary pans in which all the heavier particles, including all stones of value, lie at the outer edge.

The favourite shade, that is, the so-called pigeon's blood ruby, or red corundum—the most valuable gem in the world—is found to have but a slight distribution. Other coloured corundums also occur in the Mogok Valley, but only in small quantities; these are the blue corundum, or sapphire of every depth of tint; the yellow or oriental topaz, the purple amethyst, but the green variety (emerald) is extremely rare. Blue tourmaline also is occasionally found.

The rotary pans into which the stones fall are cleared out every twelve hours, the contents taken in closed trucks to the sorting shed, where, after a mechanical sorting in a "pulsator," they are picked over by hand, and all the stones of value placed in locked boxes. Eventually they are sorted and classified as to colour, size, etc. The labour employed in the mines is chiefly Chinese from Yunnan, the neighbouring Chinese province. Some of the workmen settle in Mogok, but most remain only while the weather is dry, and return to their homes across the mountains during the rainy season.

The ruby earth has but little clay in it as a rule, and mostly consists of gravel and sand. When first turned out in the air, the wet mass glistens in the sunlight with myriads of small rubies. When it is remembered that for hundreds of years the sole supply of the most valuable of these gems has been drawn from this source, with imperfect and limited means of working, some notion may be formed of what may be done by applying the latest and best methods which modern engineering science can command in developing the mines.

In Siam the ruby is found near the coast at Krat, and also at Chanlabun, but the stones are darker and more purple than the Burmese. Siamese rubies give dichroscope images of crimson and brownish-red as against the crimson and aurora-red which the dichroscope reveals in the Burmese stones. Rubies are also found in Ceylon, among the sands at the foot of Adam's Peak. These sands for the most part are found in old river terraces; a crystalline dolomitic limestone is supposed to be the mother rock. The stones are very clear but of a lighter colour. In India the ruby occurs, but it is seldom that the quality is anything approaching the high-class stones of Burma. In Afghanistan, to the east of Kabul, this precious stone is found in one small region. In the United States, rubies of an inferior though valuable quality have been found at Corvee Creek, a tributary of the Little Tennessee River, in North Carolina, in a decomposed garnetiferous basic rock, and in Australia, in New South Wales, a few small specimens have been found in the auriferous gravels along the banks of the Fitzroy river.

The ruby ranks above the diamond in point of value for good stones; while the price of a pale ruby of 1 carat may only be £1, a stone of the true blush, weighing when cut, 1 carat, may fetch £25 or more. In 1875 the huge sum of £20,000 was paid in London for a fine ruby of $38\frac{1}{2}$ carats. It would now be worth considerably more. Stones up to 400 carats have been discovered, but most of the larger ones are greatly discounted by their imperfect areas, and of large, flawless rubies singularly few are known compared with diamonds of similar quality and size.

Owing to the demand for this rare gem, stones of inferior kind are not infrequently offered as rubies. The most common substitutes are the balas ruby (red spinel) and the rock or Elie ruby (garnet). Both these minerals are cubic in their crystalline form, so that the optical properties can readily be used to distinguish them, for they show no double refraction and no dichroism. Their hardness is also inferior to the true gem, and the specific gravity is lower. There are two other substitutes which belong to the same system, the rubellite (pink tourmaline) and red quartz (Bohemian ruby). Here again their inferior hardness will distinguish them from the true stone, and also the lower specific gravity as compared with the ruby. Yellow topaz which has been turned by heat (Brazilian ruby) is discoverable by the same two tests. There are other inferior substitutes which may easily deceive those who

lack expert knowledge. But the most difficult to test are synthetical rubies resulting from the fusion of a number of fragments of natural rubies under intense heat. There is no jewel therefore where the jeweller's help is more necessary than in the selection of rubies. "Pigeon's blood" is a vague term as applied to colour, though to the connoisseur it conveys a well-defined and exact shade of red, with a tendency to reddish purple. Here, again, the amateur may be easily deceived, unless he places himself in the hands of a connoisseur in whose knowledge and experience he has complete reliance.

There is another point in connection with this kindly red stone—the word ruby only signifies red—which may be dwelt on here. Professor Sir A. H. Church, in his interesting monograph on precious stones, which was written as a guide to the famous Townshend collection at the Victoria and Albert Museum, mentions that "one of the happiest uses of the ruby is in the form of an inlay in certain gold vessels of Indian origin. The external surface of these vessels is covered with a system of interlacing ridges and furrows. The rubies, generally small, oval, and cut *en cabochon*, are set along the furrows. Thus they are much protected from the chance of dislodgement, while the effect they produce of a rich deep crimson groundwork over which a gold netting has been thrown is in perfect harmony with the materials and their workmanship. For naturally the metal gold, when pure or nearly pure, throws a ruddy tint when light is reflected from surface to surface. The same thing occurs in the golden furrows, where the rubies seem to rest in a golden sheen, of a hue in which the yellow and orange and red elements, now one and now another, appear to prevail."

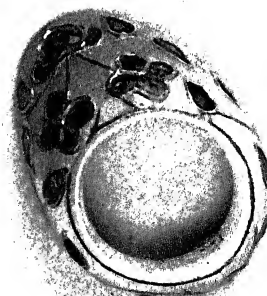
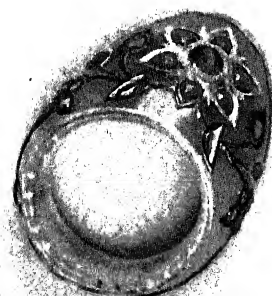
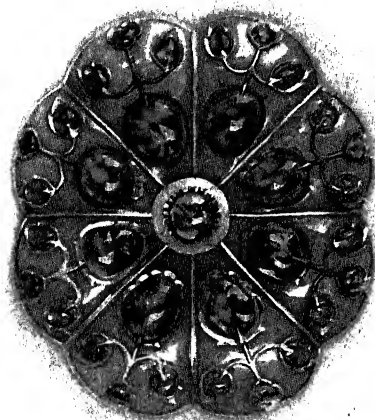
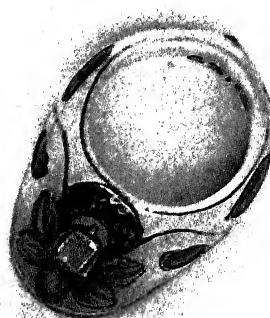
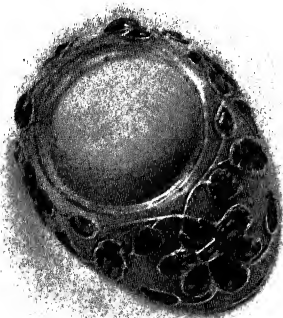
From this beautiful description of these ruby-studded golden bowls Sir A. H. Church builds up a strong plea in support of more carefully chosen setting for rubies than has hitherto been the fashion. "Surely," he exclaims, "a fine stone is worthy of a fine and originally designed setting—proportioning the latter in form, in amount of work and surface, and also in colour—whether red, or green, or yellow-gold, or enamel—to the shape and the hue of the stone to be set. And even small stones become quite beautiful when arranged with taste and judgment in accordance with these conditions." There is truth in these observations. We have become so accustomed to regard the Oriental use of jewels as barbaric that

INDIAN JEWELS OF JADE, INLAID WITH
GOLD AND SET WITH PRECIOUS STONES

Old Mogul work from Delhi

Cover of a toilet box of a Mogul princess.
Set with cabochon rubies and emeralds.

Bow-Rings (Angushtāna) worn on the
thumbs of archers and used for stringing
the bow. Various set with diamonds,
emeralds, rubies and turquoises.



we overlook the fact that it is really the Western world which is barbaric in its regard of precious stones. Here and in America a jeweller's shop is just a shop, whereas it is really the studio of an artist, a workshop in which a mass of skill and a multitude of considerations should be carefully adjusted, considerations of which the jeweller himself is ignorant until his client has placed before him the essential circumstances. It is for the client to explain the purpose for which the jewel is bought, the message it is intended to convey, the person who will wear it, the environment in which it will usually be worn. These considerations may seem trivial, but they are the very ones which give life to artistry, and inspire the artist with a lively desire to excel. Even the purchase of a ring should be, in effect, as important an artistic negotiation as the buying of a picture or a statue. When this truth is more widely accepted, we shall see works of art in gold and silver and precious stones produced by the goldsmiths and jewellers of the same original and exquisite character as those which we have come to regard with envy as the product of an age of superior artistry to our own. It is an error to assume that beauty and vitality—latent though they may be—do not prevail at this hour in every form of art; but it requires encouragement to elicit, wealth to foster them. Posterity may yet hail the years of peace that immediately followed after the Great War as those of a new Renaissance, in which the fine arts assumed a larger importance, and when creative talent—whether of painter or goldsmith, of sculptor or gem worker—found a fuller and higher expression under healthier and more active support and enterprise. Signs are not wanting that this age approaches.

The mention of war recalls the most famous historical ruby in the world, the one that shone in the helmet of Henry V. of England at the famous battle that was fought in France on "the day that is called the Feast of Crispian." This jewel, though in truth it is only a red spinel, is known as the Black Prince's ruby, and is still to be seen set in front of the English crown just as it was worn by Harry the King at Agincourt. This is its story.

In the fourteenth century Pedro the Cruel reigned in Castile, and in the neighbouring Moorish kingdom of Granada there was civil war. The chief in power, Abu Said, came to the court of Don Pedro with a magnificent retinue. Here they were foully murdered, and the chief spoil of the massacre was this so-called ruby. Pedro was later involved in war with his brother Henry, who defeated

him. He fled to Bordeaux, where the Black Prince and his wife Joan, the Fair Maid of Kent, were celebrating Christmas in royal style. Don Pedro promised untold wealth and treasure to the Black Prince if he would come to his aid. The offer was accepted, and the English Prince, leading his troops into Spain, fought for Don Pedro, and won the battle of Najera on April 30th, 1367. Elated at the victory, Don Pedro presented to his deliverer on the spot the splendid ruby which he had murdered Abu Said to possess. Shortly after the battle Pedro went to Seville ostensibly to collect the rest of the promised treasure, but the treasure never materialised, and so the Black Prince, after losing half his army from sickness, was obliged to leave Spain without other payment than this jewel. He wore it in his bonnet. But it was a costly gift, seeing that it was in Spain the Black Prince contracted the germs of the disease which carried him to an early grave.

The next scene in the history of this historic stone is on the field of Agincourt, October 25th, 1415. On the morning of the battle Henry V. arrayed himself with a gorgeousness that all contemporary writers have noted. His armour was gilt embossed, and his helmet was compassed about by a crown set with rubies, sapphires, and pearls of immense value. In this gleaming head-piece the Black Prince's ruby was a conspicuous ornament. The King's crown and iron casque did him good service that day, for, as is related, the Duc d'Alencon struck it a heavy blow with his battle-axe, which came near to finishing Henry's career on the spot. Several French knights had sworn to strike the crown from the Prince's head or perish in the attempt. They rushed him in a body, and one of them knocked off a part of the crown—but not the ruby. The King was rescued from the melee by his body-guard of knights.

At the coronation of successive Kings and Queens of England this ruby has always shone in the crown of England, and though, according to Hindu reckoning, it be only a ruby of the lowest caste, it is right that this jewel of victory, with its ancient reputation of protective influence, should occupy a foremost place in Britain's Imperial Regalia.

A remarkable ruby, also a spinel ruby—a stone of historical interest—is in the possession of Lady Carew. It is of delicate rose-pink colour, and weighs just over 133 carats. When first heard of this ruby was in possession of one Richard, a Frenchman,

who in early life had settled in Persia and embraced Mohammedanism, and occupied himself as a dealer in gems in Teheran. From him it was purchased by Mr. Charles Alison, Lady Carew's great uncle, who was British Minister at the Court of the Shah. The stone is of irregular pear shape, and measures $7\frac{5}{8}$ inches in length. It is uncut, but was superficially polished when it was dug up many centuries ago. As usual with Indian-fashioned stones, it has been bored through from end to end. Apart from its quality and size, its most remarkable feature is the series of historical inscriptions engraved upon its surface. The stone, though pear-shaped, is quite irregular. On its convex side, which may be called the front, are four smoother surfaces. On these are engraved in Persian characters the names and titles of the four great Mogul Emperors of India. The evidence that the inscriptions afford proves that the ruby belonged, like the Koh-i-Noor, first, to the mighty Akbar, the contemporary of Queen Elizabeth; secondly, to his son Jehangir; then again to his son, the Emperor Shah Jehan (indicated by the title Sahib Quirin Sani—"Second Lord of the Conjunction"); and, last, to Aurungzebe ("Alamgir"—"Lord of the Earth"—he entitles himself), who ascended the throne in 1658 and died in 1707.

So much the stone itself tells of its history during these 150 years. Thirty years later the Mogul Empire was shattered. Nadir Shah, King of Persia, looted the treasure house at Delhi, where the ruby was preserved, and probably carried it with him to Persia. From the Royal Treasury at Teheran the ruby was very likely stolen, either on Nadir Shah's murder at Khorassan in 1747, or on some subsequent occasion of disturbance when jewels had disappeared from the Persian treasury. Of its intermediate history until it came into M. Richard's possession some sixty years ago nothing is ever likely to be known.

The fact that the four great Emperors took pains to have their names incised on it, indicates that the ruby was a highly treasured heirloom; and considering the superstitious reverence of the Oriental for objects of the kind, it was doubtless regarded as a powerful talisman. Record has been preserved of other large Indian gems similarly engraved that have found their way to Europe. But their historical inscriptions have not saved them from the hands of the lapidary, who, in reducing them to regular-shaped jewels, has destroyed their identity and ruthlessly cut away priceless evidences of their history. There are, however, in existence two other

great engraved rubies which are the property of Her Majesty the Queen, the larger of them weighing over 300 carats.

As regards the cutting of rubies, it is curious that experts have proved the truth of the old saying that the colour of the stone varies with the direction in which it is viewed, the richest hue being seen on looking along the principal axis of the crystal, hence, in cutting, the gem should be so fashioned that this axis is presented to the eye of the observer, the table being thus parallel to the basal face of the crystal. The gem is usually cut as a brilliant. There are rubies which show asterism—that is star-rubies: they, as a rule, are cut *en cabochon*. More rarely step-cut stones are seen, or those in which the form of the crown is that of a brilliant, while the culasse is cut in steps. The dispersive power is small, therefore there is next to nothing in the way of colour play. Jewellers think that rose-cut rubies are relatively more effective than rose-cut diamonds. Grinding is now usually done with diamond dust on account of the quicker abrasion. The wheel is an iron one, and polishing is done on a copper disc.

We have already touched on the peculiar place which gold and precious stones have always occupied in sacred worship in the East, and we may fitly conclude this chapter on the most “gracious and benign” of jewels with a quotation translated from a sacred hymn of the East. It tells of the reward that shall be bestowed on generous donors to the temples of the gods:

“Coral in worship will subdue all the three worlds. He who worships Krishna with rubies will be reborn as a powerful Emperor; if with a small ruby he will be reborn as a King. Offering emeralds will bestow knowledge of the Soul and of the Eternal. If he worships with a diamond, even the Impossible or Nirvana, that is Eternal Life in the Highest Heaven, will be granted. If with a flower of gold a man worships for a month, he will get as much wealth as Kuvera, the Lord of Rubies, and will hereafter attain to Nirvana and to Salvation.”

CHAPTER VI

Emerald

*Who first beholds the light of day
In Spring's sweet flow'ry month of May,
And wears an emerald all her life
Shall be a loved and happy wife.*



THAT the emerald should be the jewel consecrated to the month of May is natural, for this stone has always symbolised the fresh verdure of the earth—the return of summer after winter. In classical mythology this showed itself in the ascription of the emerald to Venus, as representing the reproductive energies of nature, while in the early Christian Church emeralds were regarded as typical of the resurrection. And is there not a green country close to our shores known as the Emerald Isle?

Among Mahommedans this stone has been held in the highest esteem, for green is the sacred colour of the Prophet, and the emerald, lending itself to the graver's chisel, has been chosen as a favourite vehicle for texts from the Koran. Mr. C. W. King in his *Natural History of Precious Stones* suggests that as no lapse of time produces any sensible effect upon engraved gems, when the recesses of either the Shah of Persia's or the Sultan of Turkey's treasuries are opened, historic stones will emerge from obscurity to delight the eyes of the archaeologist and the theologian. One can but hope time may establish the truth of this prophecy; certainly were great stores of ancient engraved jewels to be found in the treasuries of either Persia or Turkey, the bulk of them would be emeralds.

This stone has always been in favour for the graver's art. Pliny mentions that when Lucullus landed at Alexandria, Ptolemy, King of Egypt, presented to him an emerald set in gold, on which was

engraved his portrait. Not so long ago an emerald found its way to London, which according to tradition had once belonged to the Great Moguls. The stone was of a beautiful colour and weighed 78 carats; round the edge in Persian characters ran the inscription: "He who possesses this charm shall enjoy the special protection of God."

No doubt in time some cultured man of wealth will make the collection of engraved stones his special hobby. There will then be assembled an amazing abundance of carved emeralds, in the form of amulets and talismans, of the existence of which there is only a suspicion at present. Such a collection would be one of the most interesting ever brought together, for it would include not only comparatively modern and well-known specimens, but jewels of old Peru, carven stones from ancient Hindustan, amulets from the dim recesses of Asia. Some of the biggest emeralds ever mined are reputed to have been fashioned into the shape of Hindu gods. A favourite goddess of the Aztecs was said to have dwelt within a great emerald, the size of an ostrich egg. In ancient Egypt the emerald was dedicated to the sacred Isis, and it was deemed right that a scarab should be engraved on it, beneath which was a standing figure of the goddess.

The emerald is regarded by mineralogists as a variety of the same species as the beryl, from which in chemical composition and in crystallisation it only differs very slightly. The value of the gem chiefly turns on its colour, which should be of a soft velvety green. It is rarely found entirely free from flaw; so that "as rare as a perfect emerald" has passed into a proverb. Both emerald and beryl in their natural state form beautiful specimens of mineralogy, the rich green of the former contrasting with the pale limestone matrix in which they are found embedded. No doubt this gave rise to the legend that an emerald grows and ripens in a mine, as a peach grows and ripens on a wall, that part which is nearer to the sun displaying the finer colour. When first the gem is withdrawn from the mine, it is of so brittle a nature that it will easily crumble, but it quickly hardens, though its hardness is less than diamond, ruby or sapphire. The priests of Peru, when the Spaniards were robbing their temples, in revenge set the story afloat that the test of a true emerald was that it should withstand the blow of a heavy hammer on an anvil; in this way many valuable stones were utterly destroyed. None the less it is said that Cortez presented a hundredweight of these gems to the King of Spain, and that on the occasion of his marriage Cortez gave to his bride many emeralds

OLD CARVED INDIAN EMERALDS

of unusual size, the work of
Mogul jewellers of Delhi

- (i.) Mounted as a pendant brooch in a border of diamonds and pearls, with a diamond in the centre ; the upper part set with two fine facettèd emeralds.

- (ii.) Mounted as a neck-pendant in a border of carved Indian rock crystal, set with diamonds ; on the cord are two carved crystal beads set with diamonds.



carved in various forms, among them an enormous stone shaped like a rose.

The most famous mines in the world are the Muzo Mines in Colombia, Central America. They lie in the Cordillera mountains, to the north of Bogota, and have been worked from time immemorial, and the stones are found in nests near bands of fluor-spar, under a calcareous bitumen deposit. It was from these mines that the gems went to Mexico and Peru.

The emerald is more widely distributed than the ruby or the sapphire. The Oriental emerald is a green corundum, of the same composition as ruby and sapphire. Once it was maintained that all emeralds came from Central America, but this theory has since been disproved. Emeralds of a fine quality are occasionally found in the Mogok Valley, in Burma. Ceylon yields a poorer variety of green corundum, while from the Ural Mountains comes a green garnet, known as the Uralian emerald. There is a well-known beryl mine in Southern India whence good emeralds have been taken, and Salzburg, in Austria, produces an inferior stone. But it is believed that the ancient source of this gem, before America was discovered, lay in Upper Egypt, the mines occurring in a depression of the mountainous range which borders the Red Sea.

In the earlier chemical researches it was believed that the colouring matter of the emerald was oxide of chrome, but, on analysis, the quantity of chromic acid obtained by Mr. Lowy, a leading authority on precious stones, was so small as to be inappreciable, and he was of opinion that the beautiful tint of the emerald is produced by some organic substance which he suggested is a carburet of hydrogen, similar to chlorophyl, which constitutes the colouring matter in the leaves of plants. Emeralds of a darker tint contain a larger amount of organic matter; and it is remarkable as a test that an emerald at low heat loses its colour and becomes white and opaque, whilst minerals of which the colouring matter is chrome (as the chrome garnet), remain unaffected by intense heat. It is possible that the organic colouring-matter of the emerald may be derived from the decomposition of the animals whose remains are now fossilised in the rock which form the matrix of the gem. This rock, as it has been mentioned, is a limestone, slightly bituminous, often black with white veins, containing ammonite and other shells. Mr. Lowy has a firm conviction that the emerald has had a wet formation, or, in other words, been deposited from a chemical solution.

An approximate idea of the value of a really deep, rich grass-green stone, clear and free from flaw, is from £20 to £40 the carat; those of a lighter shade are less esteemed; their price ranging from 5s. to £15 the carat. The emerald is cut on a copper wheel with emery, and polished on a tin one with rottenstone. It is most commonly trap cut; and when cut like a brilliant, with rounded tables, it is generally to disguise flaws, which would otherwise be apparent.

Large emeralds, besides rubies and sapphires, adorn the Iron Crown of Lombardy, presented to the Cathedral of Monza by Queen Theodolinda at the end of the sixth century, and which has never since been touched. They also appear in the crown of her husband, King Agilulph, which was remodelled into its present shape by the famous Milanese goldsmith, Anguillatho Braccioforte, in the fourteenth century. The famous sacred cup, the "sacro catino" in Genoa was for a long time thought to be a single emerald of immense size, but careful investigation has proved it to be only green glass. According to a legend that persevered until the sixteenth century, this emerald was the very cup or dish—the Holy Grail—in which the sop was dipped at the Last Supper. It was taken to Galilee, but King Herod hearing of it, ordered the cup to be brought to Jerusalem for the Paschal feast the year afterwards. A curious story avers that the Genoese Government, being in difficulties, offered the Sacro Catino to a rich Jew of Metz as a pledge for a loan of 100,000 crowns. The Jew, realising its worthlessness, declined, but none the less was compelled to make the loan, though he protested that the authorities were taking an advantage of the unpopularity of Jews to compel the loan, since they could not find any Christian broker willing to advance it. When some years later the Genoese were ready to redeem their precious relic, they were puzzled, as half a dozen different persons claimed to have it in their possession, the fact being that the Jew with the cleverness of his race had turned his discomfiture to profit and had made imitations of the Sacro Catino and pawned each for a large sum, assuring each moneylender that the redemption of the relic by the city of Genoa was certain.

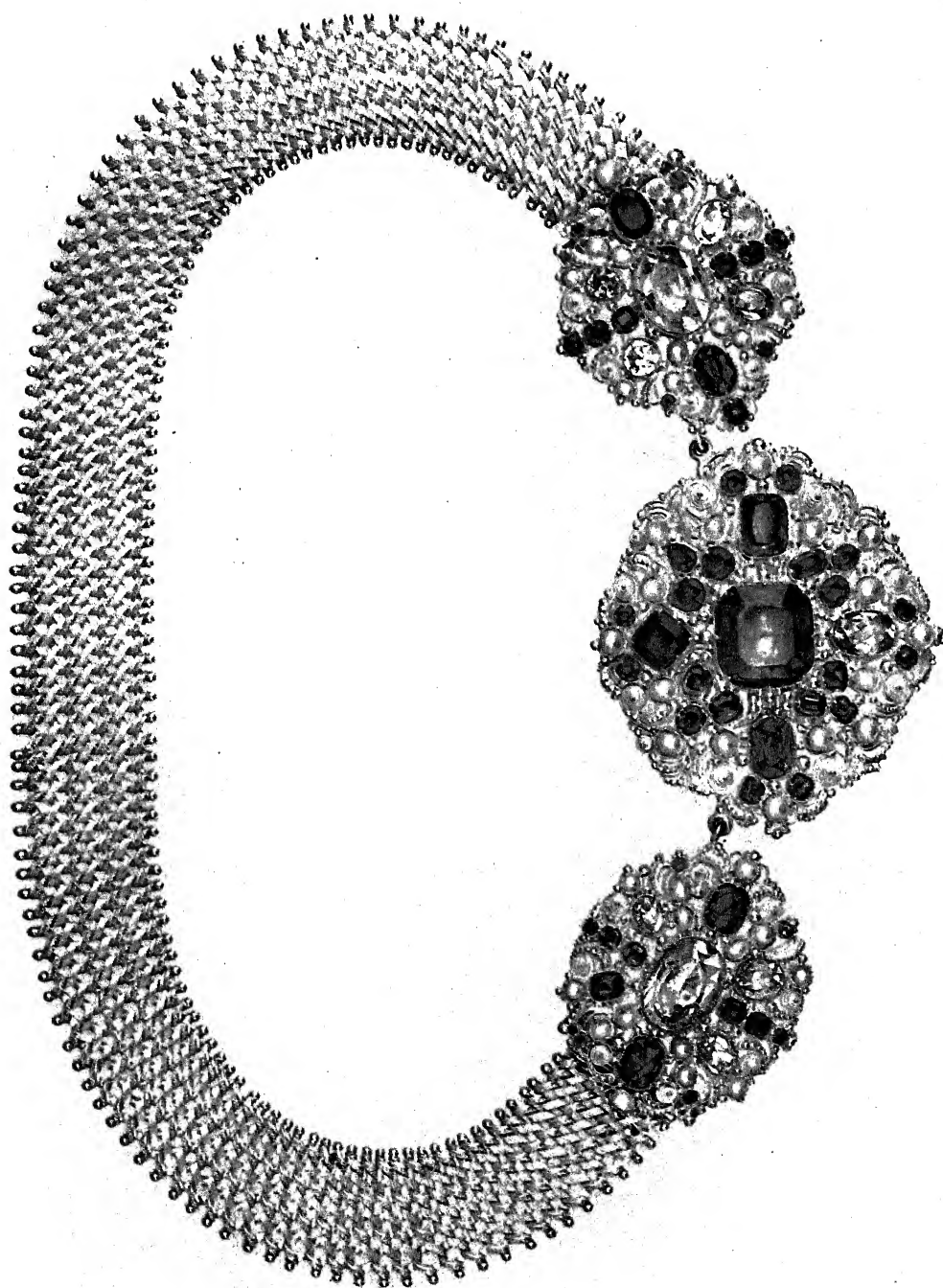
Another emerald cup, with the same legend attached to it, was mentioned by a writer in the sixteenth century as having been preserved at Lyons. A famous emerald was alluded to by the same writer as being at Prague; it was said to have belonged originally to "good King Wenceslaus."

NECKLACE WITH JEWELLED CLASPS

The neck-chain is of intricate gold-work ; the clasps are mounted with emeralds, rubies, diamonds, topazes, and pearls set in twisted and beaded gold.

A striking example of the sumptuous effect produced by the judicious grouping together of coloured stones.

The property of Lady Cory.



The uncut emeralds of the late Maharajah Duleeph Singh were famous. They descended to him from his father, the Maharajah Runjit Singh, the last native ruler of the Punjaub, and there is a celebrated native portrait of this famous Sikh monarch, showing him seated on a divan with ropes of pearls round his neck, and in his hand a rosary of emeralds, a jewel specially prized as an antidote to poison. There was an old saying that a poisonous snake could not look on an emerald without losing its sight, and a story is extant of how an Arabian gem dealer made the experiment. He secured a healthy young viper from a snake-charmer, and embedded in wax at the end of a stick, a very fine emerald. "I then brought the emerald near to the viper's eyes. It was a strong and vigorous young serpent, but as the emerald approached it its eyes protruded and dissolved into water, and it sank back inert and exhausted." This same idea appears in Moore's lines :

"Blinded like serpents when they gaze
Upon the emerald's virgin gaze."

But while the emerald was reputed in old times to destroy the eyes of a snake, it was believed to possess the power of absorbing light, and Pliny records the tale of a marble lion with emerald eyes which was set over the tomb of a petty king called Hermias. This tomb was by the sea-shore, and the light from the marble lion's emerald eyes was so brilliant that it unfortunately scared away the shoals of tunny-fish, to the great loss of the local fishermen. The emerald, it is true, possesses the great merit that it retains its purity of colour in artificial light.

We know there is no colour more soothing to the eyes than green. This may not be unconnected with the belief that the emerald was good for the eyes; an emerald set in a signet ring being regarded as a prophylactic for bad sight. Nero, it is well known, wore an emerald at the gladiatorial games, but it is thought to have been only a green-tinted pebble of concave shape. The emerald is also traditionally believed to lessen the pains of childbirth. Theophrastus records that the *smaragdus*, or emerald, possesses the peculiar property of changing the colour of water into which it is thrown to green. A stone of middling quality, however, will only dye a small quantity of water, the finest stones alone tinging the whole. The meaning appears to be that an emerald will give a greenish cast to the water by the reflection of its own colour; it does not, in reality, stain it.

In hagiology the emerald symbolises Faith—more especially faith in adversity, and it is also regarded as the emblem of kindness and goodness of heart. It is said that Pope Innocent III. sent four rings to King John of England, each a single stone—emerald, sapphire, garnet and topaz, these jewels representing faith, hope, charity and good works. The gifts were intended as a hint to an unpleasant King that he should practise these Christian virtues more often. The jewellery apparently was accepted, but the hint was not taken.

CHAPTER VII

Sapphire

*He pass'd the flaming bounds of space and time :
The living throne, the sapphire blaze,
Where angels tremble while they gaze
He saw.*—GRAY.



THE poet had in his mind the vision of Ezekiel when he wrote these lines. "And above the firmament that was over their heads was the likeness of a throne, as the appearance of a sapphire stone." Sapphire is by far the oldest, and is the most full of meaning of the words used in the language of jewels. This splendid jewel has ever symbolised the azure of highest heaven. Milton speaks of the firmament "glowing with living sapphires," and in the Book of Exodus we read that when Moses and the Elders went up into the mountains to worship, they saw the God of Israel, "and there was under his feet, as it were, a paved work of a sapphire stone." The word itself, "sapphire," is of Greek origin. In Sanscrit the stone is called "nila," signifying simply blue. And this blueness and its likeness to the unclouded heavens gave rise to the belief that the sapphire was a sure protection against evil spirits and the powers of darkness, and efficacious in obtaining the guardian-care of good spirits and of acquiring divine wisdom. So it came about that the sapphire is held to be a jewel of chastity. It won favour for use in ecclesiastical rings, and it is still worn frequently as a ring of office by those high in the hierarchy of the Roman and Orthodox Churches.

The Hindus classified precious stones into classes, assigning to each stone a planet. There were five great gems—*maharatnani*, as the native word is—diamond, pearl, ruby, emerald and sapphire.

The ruby represented the Sun, the pearl—the Moon; the diamond—Venus; the emerald—Mercury; and the sapphire—Saturn. Leaving aside their astrological significance, it will be noticed that the Hindus accurately chose the five most precious gems, a classification which will probably never be altered. Lesser jewels from time to time will doubtless have a vogue, but the intrinsic value of these five gems is, humanly speaking, never likely to change materially, and they are still as safe an investment as they were two thousand years ago. Fortunate are those who possess them, nor need they be annoyed if their good fortune raises the envy of others. For even to display one's jewels is to give pleasure. Once upon a time—it might have been when London was still a forest, before the first Roman Camp had been pitched upon the hill above the Thames—there was a Mandarin in China who was inordinately proud of his jewels—a grasping Mandarin who never gave away jot or tittle. Moving down the street of his native town in all his jewelled glory he met a Holy Man, who, bowing low, thanked the Mandarin for his gift of truly magnificent jewels.

“How can that be,” exclaimed the Mandarin, “seeing that I have never given you one.” “Oh,” said the Holy Man, with a sarcastic twinkle; “you permit me to gaze on your jewels. What greater joy do you gain from them? But you ever fear lest thieves rob you of them. I, when I have looked, go my way free from fear, therefore am I more joyful than you in my joy of your jewels.”

These five great gems have each bestowed a name on woman. Ruby and Pearl are common Christian names; Diamond is more rare, but is known; Emerald is familiar under the form of Esmeralda; and last there is Sapphira, perhaps the prettiest of them all. Yet this is a name which has been made almost impossible by that one little incident in the Acts of the Apostles.

Hardness is perhaps the most important characteristic of precious stones. The diamond possesses the greatest hardness, and the order of the four most precious stones is as follows: Diamond 10, Sapphire and Ruby 9, and Emerald 7·6. The topaz is a harder stone than an emerald, standing at eight, but not so valuable. Now the ruby, sapphire and Oriental emerald are all corundum, the hardest stone that exists after the diamond. The Oriental topaz, amethyst and other lesser stones belong to the same order. Corundum consists of crystallised alumina, oxide of the metal aluminium. From the mineralogical point of view the colour of the stones is of no importance, and

ENAMELLED GOLD NECKLACE

French work of the Seventeenth Century

The chain is composed of riband knots and bows in white, blue, and black enamel; the central bow and rosette are set with diamonds; the pendant is formed of a pear-shaped pearl and a large polished sapphire of pale colour.

Bequeathed by Lady Alma Tadema to the Victoria and Albert Museum.



chemistry, while propounding several theories, has not yet been able to determine definitely how that variation of colour is caused, which from the jewellers' point of view makes so large a difference.

In the Burma Ruby Mines in the Mogok Valley corundum of nearly every shade and tint is discovered, rubies, emeralds, and sapphires being upturned almost simultaneously, though the latter stones in much smaller quantities. All corundums possessing a distinct colour are invariably dichroic, that is to say, they present two different colours by transmitted light when viewed in two different directions. A special instrument has been invented called the dichroscope for examining the dichroism of crystals. Under the dichroscope the twin colours of the finest pigeon's blood ruby, as already mentioned, are seen to be aurora red and carmine red, and of the cornflower blue sapphire, greenish straw yellow and deep ultramarine blue. Like all corundums, the sapphire varies greatly in shade, but from earliest times the cornflower blue has been most prized. Corundum invariably occurs in crystals or in crystalline form. The forms are six-sided prisms or pyramids belonging to the hexagonal system.

Star-sapphires are even more famous than star-rubies; this phenomenon is due to the peculiar internal structure of the crystal. When cut *en cabochon* a six-rayed star is seen in many cloudy sapphires and rubies. There is a wonderful star-sapphire in the American Museum of Natural History, known as the Star of India; it weighs 543 carats and has a history of three centuries. In the hilt of the sword presented in 1913, by the Greeks of America, as an Easter present to King Constantine—"Tino" as he became contemptuously known—there was a splendid star-sapphire.

The well-known traveller, Sir Richard Burton, had a star-sapphire which was supposed to bring good luck to all who looked on it, and the fame of it spread, though Burton was not a lucky man as worldly success goes. In Ceylon the star-sapphire is believed to avert the evil eye, and is regarded as possessing such unique power that its benignity continues even after the jewel has passed into other hands. These "freak" stones are usually cloudy—of a milky blue, or a blue grey, and sometimes almost white.

Sapphires, writes Sir A. H. Church, are not only more abundant than rubies but they are more frequently found of large size. Siam and Ceylon produce the finest stones, of rich, velvety, cornflower blue; but inferior specimens are found in many parts of the world. An important spot is in the mountains of Kashmir, and several mines have

been discovered in the United States. One of these is some distance from the original sapphire district, in the upper valley of the river Missouri, in the State of Montana. This new locality yields many small stones of a uniform and fair blue colour. In Australia, more particularly in Queensland and New South Wales, sapphires are found in several places, but they have usually a greenish, sometimes a brownish tinge.

Like the emerald the sapphire is sometimes engraved, or pierced so that it may be worn on a chain. A curious treatise appeared in the fourteenth century explaining the symbolism of certain figures on precious stones. Thus an astrolabe (an instrument for taking astral observations), if carved on a sapphire, had power to increase the wealth of the wearer, and enabled him to predict the future. It may be that the first advantage was the direct result of the second. A goat or bearded man carved on a sapphire was esteemed a royal image, one that brought dignities and honours, and exalted the wearer; this charm had power to cure and preserve from many infirmities, and to free the wearer from all poisons and spells of demons. If the name of God be cut on a *ceraunia* stone, which is a star-sapphire, the wearer was to be awarded victory over his enemies, and be protected from all storms by land and sea. Among the Hebrew people it was thought that the Ten Commandments given to Moses on Mount Sinai were engraved on a sapphire stone, though lapis lazuli is probably what was meant. In the twelfth century the Bishop of Rennes lauded the sapphire above all jewels. It was, he said, like unto the pure sky, and Nature had endowed it with so great a power that it might be called the most sacred of jewels, the gem of gems. Fraud was banished from its presence, and by its means the obscurest oracles could be interpreted. The sapphire, indeed, had many attributes. Bartolomæus, writing on this gem in the fifteenth century said, "Also wythes love well this stone, for they ween that they may werke certain wondres by vertue of it."

Some of the wonders worked by the sapphire were, if report speaks truly, far from virtuous. For instance, there is in existence a notorious sapphire of a peculiar tint. In the daylight it is of a rich blue, but by artificial light it appears violet and resembles an amethyst. When this stone was in the possession of a Polish nobleman in the eighteenth century, the story goes that he used it in order to test the fidelity of his mistresses. If the stone maintained its colour for three hours the wearer was innocent, but if it changed colour she was

CHAPTER VIII

Amethyst—Topaz—Turquoise

*Rich and rare were the gems she wore,
And a bright gold ring on her wand she bore.*—MOORE.



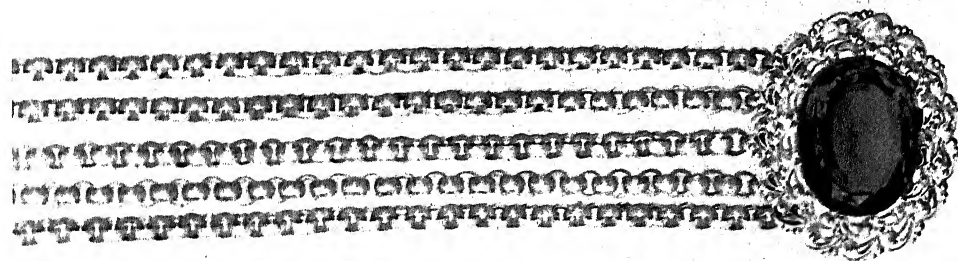
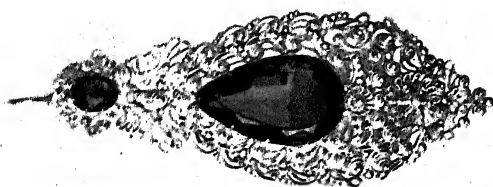
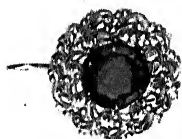
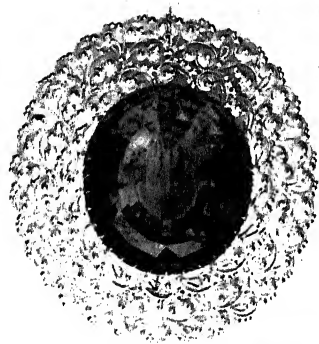
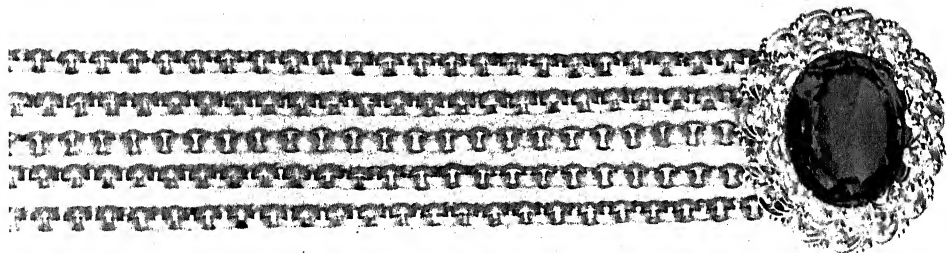
It was in the beginning, so will it be until the end, women will always delight in gems that are precious and scarce. How old is this love of fine stones is testified by the vague phrases which are in current use, for the sole reason that exact terminology is absent where gems are concerned. For instance, it is true to say that an amethyst a foot in length is, comparatively speaking, not uncommon; it is also true that an amethyst is only a violet ruby or sapphire, but to aver that violet rubies a foot in length abound would be false, for the amethyst is a name which covers two distinct stones, one a corundum, *i.e.* of the same family as the ruby, sapphire, and Oriental emerald, and the other a quartz of the nature of rock crystal. So, too, with the topaz. It is a name which includes the white or yellow sapphire, yellow quartz, and a Brazilian variety which is a stone by itself. The turquoise stands apart; it is perhaps the favourite of the lesser gems, and in gold setting it is superb.

These three stones have been grouped together in this chapter, because in all that may be said about them, the warning must be borne in mind that in making a choice care must be taken to buy only from those connoisseurs on whom absolute reliance may be placed, for deception is so easy when the same word, as in amethyst and topaz, means totally different stones, or when, as in the case of turquoise, an unscrupulous seller may easily pass off a stone, correctly named, but of such an inferior grade that it quickly loses that exquisite blue colour which is the glory of this opaque stone.

AN AMETHYST PARURE

Consisting of a brooch, necklace, and ear-rings. The gems are fine Siberian amethysts; the mounts are of elaborate gold-work.

The property of Lady Cory.



Amethyst is a Greek word signifying "a remedy against drunkenness," and it was applied to the violet stone by the old Greeks among whom it was reputed to have this power. One legend runs that the god Dionysos, offended at some neglect he had suffered at the hands of man, swore to avenge himself on the next mortal that he passed on his triumphing way, declaring that his tigers should destroy the hapless being. Now there came along the road a timid maiden to worship at the shrine of Diana. When she saw the dread beasts preparing to spring, she cried aloud to the goddess to protect her. Diana heard her prayer and turned her into rock crystal. The gay young god Dionysos, ashamed of his cruelty, called for wine, poured out a libation to the maiden, and the crystal was stained with purple wine. So it has remained to this day.

Another more prosaic and more possible explanation of this peculiar reputation is that in old times drinking cups were made of this violet crystal, in which water was served to drunkards, when it had the appearance of wine. The singular reputation for curing drunkenness has always clung to the amethyst.

The occidental amethyst, so called to distinguish it from the oriental amethyst or corundum, is quartz of a violet colour. The range of colour includes reddish-violet tints of pale or almost colourless shades, and deep rich tones of pure violet. Stones of this character are not infrequently known to show patches of different shades of colour, or colourless portions side by side with those of a violet hue, the different coloured portions being sometimes arranged in regularly alternating bands or sectors. A few rare cases of crystals showing a second colour—yellow or green—have been met with.

As a general rule amethyst is cloudy; perfectly clear and transparent material is distinguished as precious amethyst; the latter alone is cut as gems, which are estimated according to their transparency and their depth and uniformity of colouring. Specimens of pale colour, having a patchy appearance, are almost worthless as gems.

There is, however, great similarity of colouring, that of the quartz amethyst being very like that of the violet corundum or oriental amethyst. It compares with the latter unfavourably in one respect, however, since in artificial light it appears of a dingy grey, while under similar conditions the oriental amethyst retains unimpaired its beauty of colour.

Amethyst is dichroic, but this feature is not equally prominent in all crystals, being well marked in some and scarcely appreciable in others. Of the twin-colours seen in the dichroscope, one is more red and the other more blue than the other.

The oriental amethyst when subjected to high temperatures loses in colour, changing first to a more pronounced yellow, gradually assuming a greenish shade, and finally loses all suspicion of colouring. The change of colour from violet to yellow possesses a certain practical significance, since thereby the more abundant violet amethyst can be transformed into the rarer yellow citrine. As a matter of fact many citrines, which are much prized as precious stones, are nothing other than burnt amethysts.

The colour of amethyst has been ascribed to the presence of various substances. The pigment is present in an extremely finely divided state, and is mechanically intermixed with the colourless quartz substance, but the individual granules are not recognisable even under the highest powers of the microscope. In patchy specimens the colouring matter is irregularly distributed through the substance of the stone. The pigment has been variously supposed to be potassium ferrocyanide, ferric thiocyanide, or some organic substance, but it is most commonly considered to be manganese, which is shown by analysis to be often present, though only in extremely small quantities. For example, in a deeply coloured Brazilian amethyst, one-hundredth per cent of manganese was present, while in a stone of a paler colour it was completely absent, so that this evidence cannot be taken as conclusive.

The form taken by crystals of amethyst agrees in all essentials with that of rock crystal. Amethyst crystals, too, very often have the prismatic habit of rock crystal, especially when they colour in the crevices of gneiss and such like rocks. On the other hand they usually differ from rock crystal in the absence of faces other than those of the prism and the terminal faces of the hexagonal pyramid, being in this respect more like common quartz. Crystals of amethyst with the pyramidal termination often occur so closely crowded together on the matrix as to form a column. Of the six terminal pyramid-faces it frequently happens that only three alternate ones are developed, the other three being very small or even completely absent, so that the crystals sometimes have the appearance of cubes. Such cube-like amethysts are often met with amongst the material sent in large quantities from South America for cutting.

Crystals of quartz amethyst sometimes attain a considerable size, the largest known being over a foot in length. These very large crystals are rarely quite transparent or uniformly coloured, and are therefore unsuitable for gems, but there is an abundance of crystals which fulfil these conditions, and which are large enough to supply the market with any amount of rough material.

At one time the best known amethyst was that which occurs in the cavities of certain rocks in the neighbourhood of Oberstein on the Nahe, a tributary of the Rhine. The cutting of amethyst is still carried on at Oberstein, but now the local supplies are, for all practical purposes, at an end. Plentiful supplies of fine material at low prices can be easily obtained from other parts of the world. Brazil and Uruguay supply most of the amethyst now in commercial use. The crystals are shipped packed in barrels or in skin sacks, and with them come many other varieties of quartz, such as citrine, colourless rock crystal, etc.

In the United States amethyst is found in the State of Maine, but only a small percentage is used for cutting, which is chiefly absorbed by the home markets. The stone is widely distributed in the region round Lake Superior, more especially on the Canadian side. The amethysts of Guanaxato in Mexico are not equal in quality to those frequently found in ancient Aztec graves, so that there may prove to be other localities wherein the rocks bear amethyst than those known to-day. In the gem gravels of Ceylon amethysts have been found far superior even to those of Brazil. Important amethyst mines exist among the Ural Mountains in Russia.

Amethyst is cut most frequently as a table stone or in the step-cut, the brilliant form being rarely adopted. Fine large amethysts of a uniform colour are priced at from 10s. to 12s. per carat. The large amount of fine material discovered during the nineteenth century in South America is partly accountable for the depreciation in the value of the amethyst.

In ancient times amethyst was often used for seal-stones and engraved with various devices, besides being fashioned into larger objects, as for example, the bust of Trajan, carried off by Napoleon from Berlin. This use of the occidental amethysts is still common. The oriental amethyst is much esteemed in ecclesiastical jewellery, its soft violet colouring being in consonance with the position of the wearer, and it enjoys the good reputation of being

able to control evil thoughts. Its Hebrew name—Ahlahmah—signified that this stone possessed the power of inducing dreams and visions. In the thirteenth century it was said that a bear engraved on an amethyst signet-ring had the virtue of putting demons to flight, and preserved the wearer from drunkenness.

* * * * *

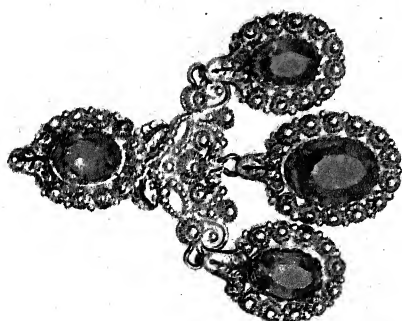
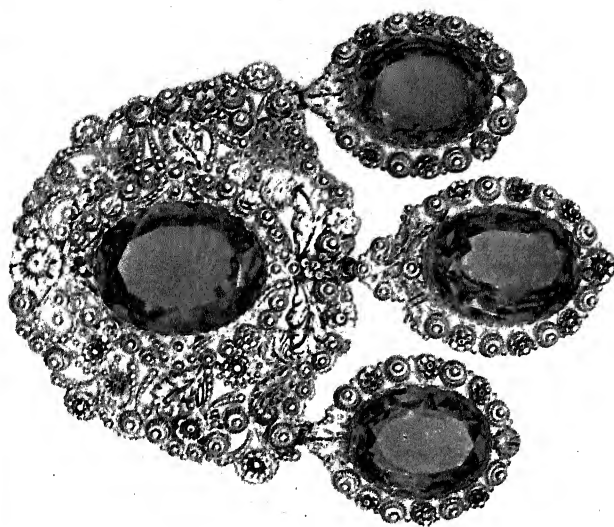
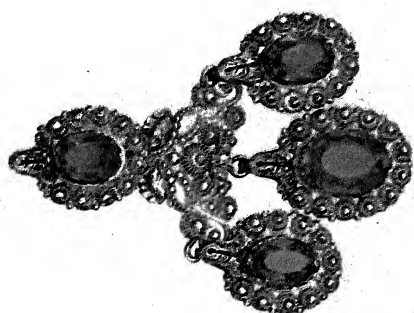
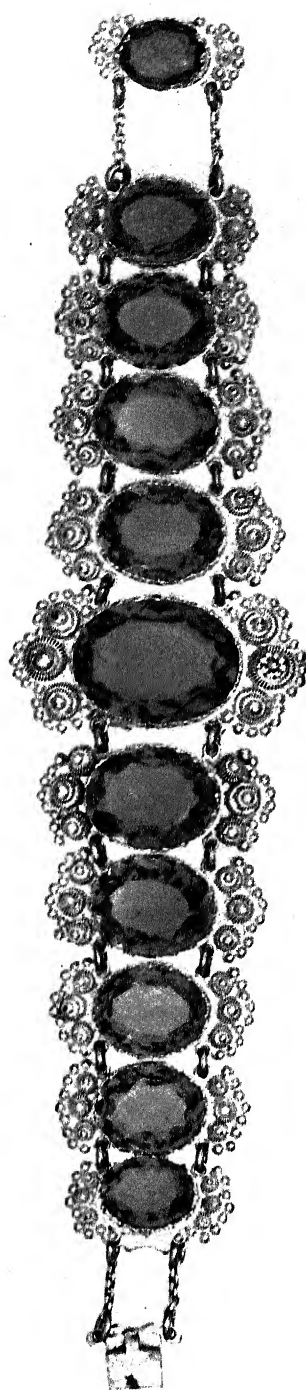
The Topaz is the best known of all the yellow stones. It is sometimes confused with the chrysolite (which signifies in the Greek "golden stone") though the chrysolite is more usually identified as the peridot. The word topaz is said to be derived from the island of Topazion in the Red Sea. The legend goes that these gems, the peculiar treasures of Pharaoh, were guarded by serpents, and that they were only visible at night to those permitted to gather them, when their yellow flame shone from the rocks. These Egyptian topazes are presumed to have been peridots. The topaz, as we know the name, is applied to yellow corundum, or oriental topaz, to yellow quartz, or occidental topaz, called also citrine, and to Bohemian and Spanish topaz. Yellow fluor-spar is sometimes called false topaz. The best true topaz comes from the Brazils and Siberia, and is a fluo-silicate of aluminium, in which a little water is always present. It is found in the British Isles—at St. Michael's Mount in Cornwall, among other places. Good topazes also come from Burmah and Ceylon, and they have been found in Australia. A magnificent deep blue topaz was found in Ceylon about twenty years ago, which when cut weighed 355 carats. Crystals of topaz as small as a pin's head have been found, but very large ones weighing several pounds are not unusual. A beautiful transparent crystal of topaz weighing more than twenty-five pounds was found in Siberia. A crystal of topaz, 2 feet in length and 137 pounds in weight, was discovered in Norway, and is now in the British Museum.

The topaz differs from most precious stones in that it has a perfect cleavage, which is parallel to the basic plane, that is to say, at right angles to the length of the striated prism. In consequence of this cleavage, topaz crystals, when removed from the matrix, almost invariably break away with a smooth, shining plane face. A crystal of topaz which is too long to be cut as a single stone may be easily cleaved with a chisel into fragments of suitable size. The drawback connected with this perfect cleavage is that it is the cause of a tendency in the stone to develop fissures, often indicated by iridescent

A PARURE OF PINK TOPAZ

Consisting of a necklace, pendant, and pair of ear-rings, in fine mounts of coloured gold, formed of rosettes and beaded work.

The property of Lady Cory.



urs, which detract considerably from the beauty and value of stone. To avoid the development of these fissures the stone must be allowed to fall or be jarred in any way; so that when undergoing the process of cutting great care is necessary. In hardness the z is surpassed only by the diamond, corundum and chrysoberyl. On this account it takes a good polish and exhibits a brilliant e.

When rubbed, a topaz becomes strongly electrified, and is capable of attracting to itself any light bodies like scraps of paper. Some of the gems possess this power more than others, thus, for example, stones from Saxony acquire a charge of electricity when merely rubbed between the fingers; while in the case of certain Brazilian topazes, a pressure of the fingers along the length of the prismatic crystal is sufficient. Also, when heated and allowed to cool slowly, a topaz becomes electrified and acquires a greater charge than any other precious stone under similar circumstances, with the exception of tourmaline. The electricity may be retained for thirty hours or more after the stone has cooled down to its original temperature. This phenomenon, under certain circumstances, is a test by which a topaz may be distinguished from those other stones which it closely resembles.

The range of colour exhibited by the true topaz is considerable. The purest variety is colourless. It is found as crystals in the Ural mountains, among other places, and in still greater abundance, in the form of rounded water-worn pebbles, in the streams and rivers of the State of Minas Geraes in Brazil. These pebbles, which are met with also in New South Wales, are often perfectly colourless and transparent, and are known to the Brazilians as "*pingos d'agua*" (drops of water). White topaz is sometimes known to the trade as "*d'eau*", the French equivalent of the term. As already related, the Braganza diamond belonging to the Portuguese Crown Jewels is probably nothing more than one of these topaz pebbles of unusual transparency and beauty. These stones are often called "slave diamonds" on account of their resemblance to the diamond, and when cut they are sometimes passed off as the more precious

The colour of topaz, though usually pale, is sometimes deep and intense, and its dichroism, though scarcely apparent to the naked eye, may be easily observed in the dichroscope. Topazes are very frequently found of a blue colour, either a pure blue or a blue tinged with green.

Dark blue topaz is unusual. Blue-white stones are common in Brazil, and in the Ural mountains; the latter are known as Siberian or Tauridan topaz. Stones of a darker shade of pale blue are called Brazilian sapphires, a term which is applied also to the blue tourmaline.

Bluish-green and greenish-blue topaz so closely resembles aquamarine that a careful examination is sometimes necessary in order to distinguish between them. Topaz of a yellowish-green colour is rare; the typical shade is yellow. While yellow topaz is the only variety which is recognised by jewellers as topaz, it is by no means always of the same tint, and stones showing different shades of yellow differ in value, and are distinguished by special names. Brazil would appear to be the principal home of the variously tinted stones of yellow, gold-yellow, honey-yellow, wine-yellow, and other shades.

Topaz of a pronounced red colour occurs but rarely. It is met with occasionally in Brazil associated with crystals of a yellow colour, and is usually of a light rose-red inclining to lilac, very similar to the colour of balas ruby or spinel. This variety is known as rose-topaz. When of a deep red colour it is sometimes referred to as Brazilian ruby. Rose topaz, which is so rare in nature, may be produced artificially by subjecting yellow topaz, especially the Brazilian, to a gradual rise of temperature, when it assumes a red colour. Most rose-topazes are, in reality, burnt-topaz, *i.e.* the gem altered by heating. The rise and fall of temperature to which the stone is subjected must be very gradual. The darker the original colour, the darker will be its colour after heating. There are various methods in use for the artificial production of the red colour of rose-topaz; in one, for example, the stone is packed in a crucible with powdered charcoal, sand, ashes, or any other powder, slowly heated, then slowly cooled; in another it is enclosed in many wrappings of timber, this material is then fired, and the change in colour thereby effected.

The form of cutting best suited for coloured topaz is that of small steps, narrow and equidistant from each other. The brilliant form of cutting is sometimes used for coloured stones, but is more often seen in colourless topaz; yellow topazes are occasionally table cut. In cases of light coloured stones, like Saxon topazes, an added brilliancy and depth of colour is given by the use of a burnished gold, or in some cases of a red foil. Blue topaz is always backed with a shining foil.

The topaz varies in value according to its quality; large stones are found quite as frequently as small ones, consequently the value of the cut gem is proportionate to its size. Some years ago a good topaz would be worth 30s. a carat, but since then it has decreased in value. Its beauty is so undeniable that at any time this stone may come into fashion again, when prices would rise at once.

* * * * *

Turquoise blue has come to have a clearly defined meaning of its own. It conjures up in the mind a vision of the purest blue—of the blue that hangs in the sky on a clear day above the snowpeaks of the Himalayas. On the Roof of the World, indeed, the turquoise is a common ornament—raw turquoises strung loosely together are the prized necklaces of the native women, and find their way into the British hill settlements from the remotest valleys of Yarkand and Tibet. The stone is also hung round the neck of the favourite pony, whether to ward off the evil eye or as a protection against stumbling is difficult to say. A stumble on those narrow rocky paths which skirt precipitous mountains may mean instant death, and records which go back many centuries make mention of the power of the turquoise to keep the feet of men and horses from falling. Sir John Mandeville, writing in the fourteenth century, said that the Turks attached this stone to the bridles of their horses to protect them from the ill effects of drinking cold water when overheated. In a thirteenth-century treatise on jewels it was asserted: "Whosoever owns the true turquoise set in gold will not injure any of his limbs when he falls, whether he be riding or walking, so long as he has the stone with him."

Among the Arabs and wilder hill-tribes of Asia a turquoise used often to be set in a favourite gun or jezail, but whether it was thought to work a charm other than bestowing increased beauty on a favourite weapon is not known. It is curious that among the Apache Indians of North America a bow tipped with turquoise or a gun studded with the blue stone was thought to be an infallible weapon, the turquoise imparting unerring aim.

It was the Venetians who gave this precious stone its present name, which only means the Turkesa or Turkey stones, as all turquoises found their way to the West through Turkey. The word used, at one time, to be spelled turkois. Like so many precious stones it is mainly composed of aluminium, but it is unique among precious

stones in that it is the only stone that belongs to the phosphates. Turquoise is a hydrous phosphate of aluminium in which is a small percentage of iron oxide and copper oxide. It is the copper oxide that gives to the stone its colour.

This colour ranges from sky-blue to mountain green, the latter being not a pure green, but containing both blue and grey tones. Turquoise of an intense and deep colour rarely occurs, but pale shades in great variety and forming a complete series from blue to green are common. Of these the pure sky-blue is the most prized, and it is only turquoises of this colour which in Europe and the East are esteemed valuable. The more the colour inclines towards green the less worth does it possess, and specimens of a distinct green are only used as gems in a few parts of Arabia.

The most important turquoise mines in America are in New Mexico, in ancient times part of the Aztec kingdom. The ancient Mexicans had a great admiration for the turquoise; they prized it more highly than they did gold, and it was their chief adornment. It has recently been ascertained, that it was the green and not the blue turquoise which was held in such peculiar esteem. The green precious stone, *chalchihuitl*, so much admired by this ancient people, is considered by some authorities identical with green turquoise. After the fall of the kingdom of Mexico, the turquoise still continued to be the favourite stone of the inhabitants of the region, that is to say of the Pueblo and Navajo Indians.

One of the ancient Mexican mines, which must have been worked before the discovery of America by Europeans, has been described as an enormous funnel-shaped pit, the sides of which are steep and precipitous. At one place there are overhanging rocks forming a kind of cave, while at another the slopes are more gentle, owing to the falling in of waste material from above. An idea of the great age of the excavations may be gathered from the fact that pines, deodars, and other trees hundreds of years old are now growing on its side. The pit is about 200 feet deep and 300 feet wide, and out of it many thousands of tons of solid rock must have been excavated. In its neighbourhood are to be seen similar but smaller pits, and it would seem that the whole surface of the turquoise-bearing mountain was turned over in the search for the precious stone. Besides these surface-workings there exist also underground mines excavated at the same time, some of which are of considerable extent. They were discovered when attempts were made to re-work this old deposit.

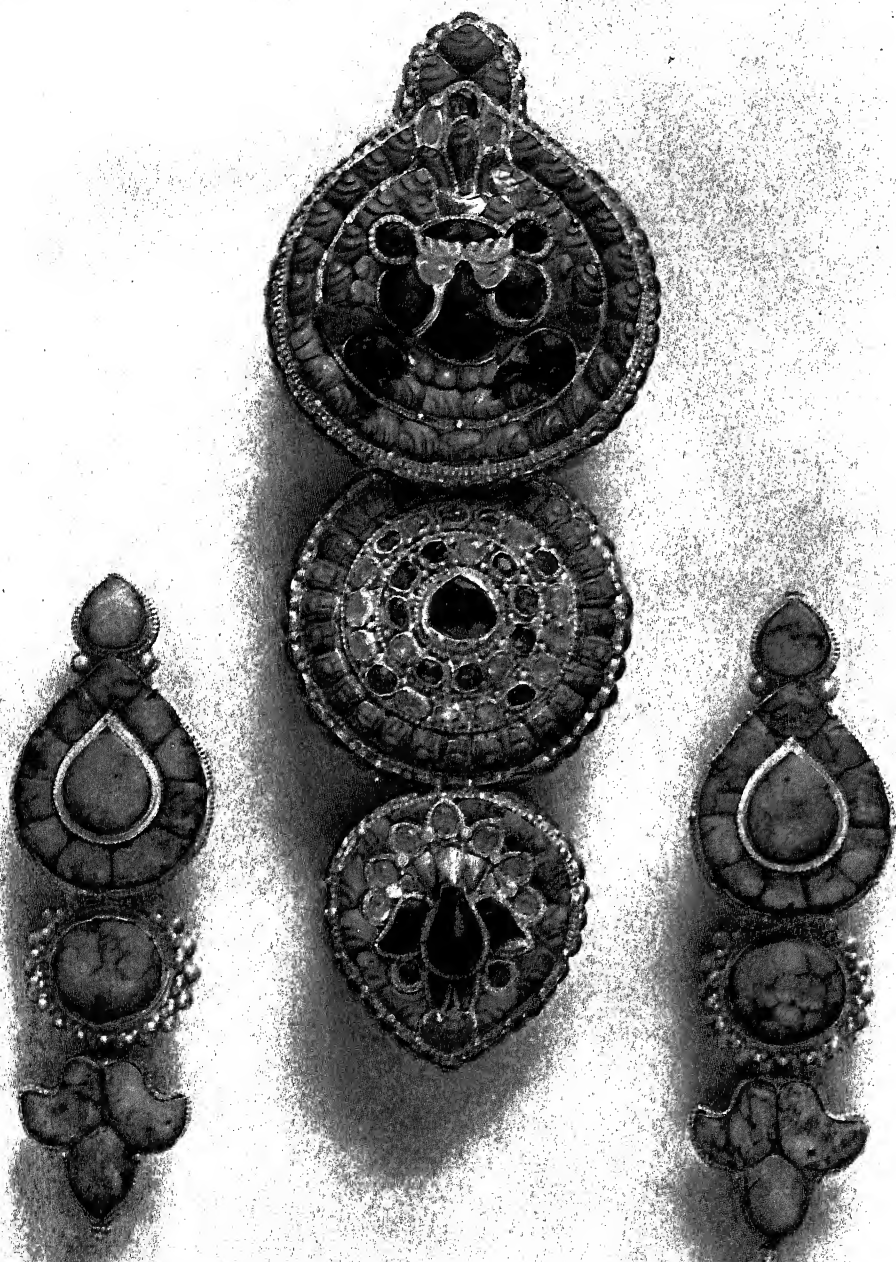
TURQUOISE EAR-RINGS FROM THIBET

Acquired during the British
Mission to Lhāsa in 1904

Gold Ear-ring (one of a pair), used to decorate
an image in one of the great Lāmaist temples,
jewelled with turquoises, lapis lazuli,
emeralds, rubies, sapphires, cornelians, etc.

Pair of gold Ear-rings of the type worn by
men of position in Thibet, and stated to have
been used by a Lāma monk of superior rank ;
set with turquoise matrix of fine quality.

The property of the Victoria and Albert Museum.



The abandonment of these mines was due to a great national disaster which befel the Indians in 1680. Owing to the undermining of the ground by Indian miners a large section of the mountain side suddenly fell in, killing a number of workers on the spot. This accident was the immediate cause of the uprising of the Pueblos, which resulted in the expulsion of the Spaniards.

In the United States to-day most of the turquoise comes from the New Mexico mines, but it is also found in the States of California, Colorado, and Arizona.

By far the most important mines for the finest turquoise are in Asia, more especially those of Persia; indeed "Persian turquoise" signifies the highest quality of stone. Some of those mines have been worked for centuries, and are mentioned in the treatise on mineralogy written by the Arab, Mohammed-ibu-Mansur in A.D. 1300. According to this work there was a legend that the richest of the mines were opened by Isaac the son of Abraham, and they are consequently known as the Isaac mines.

The stones, when found, are usually roughly cut *en cabochon* on the spot, and then taken by the elders of the village—some fifteen to twenty in number—into Meshed for sale. Thence they travel by the hands of Bokharan merchants to Russia, especially to Moscow and to Nijni-Novgorod, and are sold at the fairs to dealers, by whom they are distributed over the world. General Schindler was informed by the turquoise merchants at Meshed that turquoises to the value of £12,000 were exported to Russia annually, while the smaller sales in Meshed itself amounted to £4000. This latter sum is due, for the most part, to turquoises mounted in tin or silver, but never in gold, and sold to pilgrims as lucky stones.

In the districts round the Sinai Peninsula turquoise is freely found. The best known mines are situated in the Wadi Moghara (meaning hollow valley). These are very ancient and were worked on a large scale in ancient Egyptian times, according to one authority as early as the period of the Third Dynasty, 4000 B.C. The discovery of numerous inscriptions and implements of various kinds proves that a garrison was maintained here by the Egyptians for the protection of the turquoise mines and of an important copper-mining industry. The existence of these mines was for a long period completely forgotten; they were at length re-discovered by Major C. K. Macdonald. Work was at once recommenced, and some of the

largest and finest stones found were shown in London at the Exhibition in 1851. One, in the possession of Major Macdonald, was as large as a pigeon's egg, but in a very short time it lost its colour and became greenish white, and, compared with its original value, worthless; but specimens presented by Major Macdonald to the British Museum in 1862 still retain their fine blue colour, though they have been exposed to a strong light for many years.

The turquoise of the Sinai Peninsula is not, however, confined to the sandstone of the Wadi Moghara, but is found in porphyry outside the valley. In the form of thin plates it penetrates the porphyry, and differs from the turquoise found in the sandstone in that its beautiful blue colour is permanent. Mines of special importance are at the so-called Well of Moses, Neseb, and others at Nasaiph Well, between Suez and Sinai.

The best turquoises from the Sinai Peninsula are quite equal to Persian stones, and some even surpass them in beauty and depth of colouring. Fine gems from this locality appear on the markets as Egyptian or Alexandrian turquoises.

Turquoise varies in price, which depends mainly upon size and colour. Small stones are bought in thousands, and rather large specimens in dozens, while those above a certain size are sold singly. A carat stone of the best quality may be worth fifty shillings, but the price of the larger ones, owing to their rarity, is not in proportion to their weight. Large turquoises of fine quality are few in number. Among such may be mentioned a heart-shaped stone two inches in length, which, many years ago, was in the possession of a Moscow jeweller. It had been formerly worn as an amulet by Nadir Shah: an inscription from the Koran was engraved on it in gold, and it was valued at £500. Another stone, in the collection of the Imperial Academy at Moscow, measures more than three inches in length and is one inch in breadth. The largest and finest turquoise in existence is believed to be one that is in the treasury of the Shah of Persia.

In the East turquoise is regarded as a lucky stone, and he who first sees a turquoise after beholding the new moon will have good luck all the month. Both in the burying places of ancient Egypt and of ancient Mexico turquoise necklets have been discovered with animals and birds rudely carved on the stone, so it has obviously been a favourite ornament for thousands of years.

The legend grew that the stone changed colour in sympathy


AMETHYST—TOPAZ—TURQUOISE

83

with the health or even the affections of the wearer, and wise women have existed who claimed the power of being able to restore to a faded turquoise its former beauty. In this legend there is a certain amount of common sense, for just as pearls improve by being worn next the skin, a turquoise is liable to deteriorate, for the perspiration of the body may change the colour owing to the susceptible copper-oxide which it contains.

CHAPTER IX

Opal—Moonstone—Cat's Eye—Peridot

“HE wore no turban or headdress of any kind, saving a blue riband drawn through her auburn hair, and secured by a gold clasp, the outer side of which was ornamented by a superb opal, which amid the changing lights peculiar to that gem, displayed internally a slight tinge of red like a spark of fire. . . . When her eyes sparkled, her cheeks reddened and her whole frame became animated, it was pretended that the opal clasp amid her tresses, the ornament which she never laid aside, shot forth the little spark or tongue of flame which it always displayed with an increased vivacity. In the same manner, if in the half-darkened hall, the conversation of Hermione became unusually animated, it was believed that the jewel became brilliant and even displayed a twinkling and flashing gleam, which seemed to be emitted by the gem itself, and not produced in the usual manner by the reflection of some external light. Her maidens were also heard to surmise that when their mistress was agitated by any hasty or brief resentment, they could observe dark-red sparks flash from the mystic brooch, as if it sympathised with the wearer's emotions. . . . Even in the use of holy water at the door of the church, she was observed to omit the sign of the cross on the forehead for fear, it was supposed, of the water touching the valued jewel.”

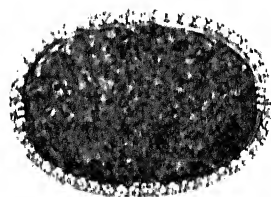
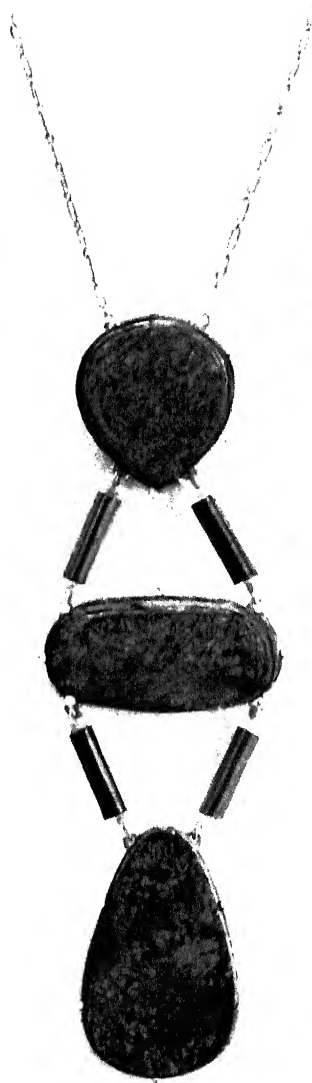
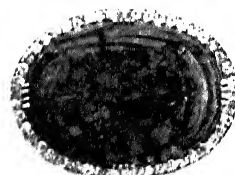
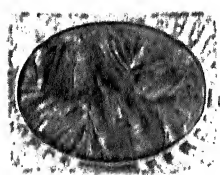
This passage contains one of the most celebrated descriptions of a single jewel which occur in English romance. It is taken from Sir Walter Scott's *Anne of Geierstein*, and the opal described was worn by the Lady Hermione, who married the Baron of Arnheim. At the christening of their first child the Baroness was taunted by a neighbour for neglecting the rites of Christianity in that she did not touch her forehead with holy water, and sign it with the cross. She had, it appears, an excellent reason for not performing this religious rite :

“As they passed the threshold of the chapel to the christening, the Baron dipped his finger in the font-stone. Then as if to confute the calumnies

FIRE OPALS

Gems of unusually brilliant quality, displaying the widest ranges of colour. Mounted in diamonds as brooches and pendants.

The photograph gives some idea of the beauty of these stones ; but the richness of their colouring can only be fully appreciated when they are seen in motion.



of the malevolent Lady of Steinfeldt, with an air of sportive familiarity which was rather unwarranted by time and place, he flirted on the beautiful forehead of his lady a drop or two of the moisture which remained on his own hand. The opal on which one of these drops had lighted, shot out a brilliant spark like a falling star, and became the instant afterwards lightless and colourless as a common pebble, while the beautiful Baroness sunk on the floor of the chapel with a deep sigh of pain."

They carried her to her bed-chamber. She sent for the Baron, and they were closeted together for an hour. On leaving his lady, the Baron locked and double-locked the door of her chamber and returned to the chapel, remaining there prostrated before the altar. The guests compelled medical aid to be sent to the sick woman :

"When upon opening the door of the chamber in which the Baroness had been deposited little more than two hours before, no traces of her could be discovered, unless that there was about a handful of light gray ashes, like such as might have been produced by burning fine paper, found on the bed where she had been laid."

This story of the vampire opal, fit companion to that of the vampire diamond related earlier in this volume, is assumed by some authorities to be responsible for the superstition that opals are unlucky. It is a comparatively modern superstition, for in old times the opal was deemed the luckiest of all precious stones, in that it was thought to combine all the virtues of all the various coloured gems, whose rays were united in its glittering glory. Sir Walter Scott's story is now so little read that it may be questioned whether it has had any effect on the character of the opal, its reputation for ill-luck being probably owing to the fact that it is the most delicate of gems, and may, under harsh treatment, dissolve into a light gray ash, such as was the sole relic of the Lady Hermione. The foolish nineteenth century superstition that ill-luck dogs the footsteps of its owner is happily passing away. We now prefer to regard the opal rather as a jewel of good luck. Its beauty, indeed, is symbolic, its radiance being curiously like that of the morning sun shining through the mists of dawn. So strong a hold has its particular sheen taken on the public mind that it has given a new and vivid word to our language, and *opalescent* has come to have a meaning that would be incomprehensible to anyone who had never seen an opal.

THE ROMANCE OF THE JEWEL

The origin of the name is unknown. It occurs in the Greek, and those writers are mistaken who in recent times have attributed it to a derivation of *ophthalmos*, the Greek for an eye. There is, of course, Pliny's well-known enthusiastic description of the "opal of Noinus," a Senator who had been prosecuted by Marc Antony. This opal was said to have been the size of a hazel nut, and worth two million sesterces (about £15,000). "In it," he says, "you shall see the burning fire of the carbuncle, the glorious purple of the amethyst, the green sea of the emerald, all glittering together in an incredible mixture of light. Some opals by their refulgent splendour rival colours of the painters; others the flame of burning sulphur or of fire quickened by oil."

Opal, in mineralogy, is applied to certain forms of silica; that form of the mineral with which we are concerned here is known as the precious, noble, oriental or celestial opal. Celestial opal sounds the most fitting term. Its beauty depends solely upon the magnificent display of delicate colours seen on its surface, a feature which is to be found in no other stone, so that in this respect an opal is unique. It is generally translucent, or at most semi-transparent. When seen by transmitted light the stone appears reddish-yellow, but in reflected light it is colourless, with a milky cloudiness, or milk-white with a faint shade of blue or pearl-grey. A pronounced body-colour, such as yellow, blue, red, green or black, is rarely seen. Of these, yellow, ranging from wine-yellow to sulphur-yellow and red, especially a yellowish-red shade, are less infrequent than others. Rose-red opal, of which a magnificent example is preserved in the Green Vaults of Dresden, is very rare. Black opal is sometimes of extraordinary beauty, the play of colours showing up with striking effect against the dark background of the stone.

The characteristic play of colours of all celestial opal is only shown in reflected light. The display of colour may be visible over the whole surface, or may be limited to isolated spots which merge imperceptibly into the surrounding uncoloured portions. Again, the whole surface may show a play of one uniform colour, yellow and green being in such cases much admired. In other stones there may be areas over each of which there is a play of single colour, the play of colour over any one area differing from that over any other, and the different areas merging gradually together.

The play of colours is indeed very variable and never identical in any two stones, especially those from different localities. Thus, in the

Hungarian opal, the colour is distributed irregularly in small patches and spangles, giving a variegated effect, while in the Australian opal large areas of the surface display one uniform colour.

These stones in which close-set angular patches of colour form, as it were, a minute variegated mosaic, are known as harlequin-opal, a term which is also applied sometimes to stones in which the ordinary play of colours has a yellowish red instead of a white background. In a flame-opal the colours are distributed more or less regularly in bands and streaks, while the whole surface of a gold opal glows with golden light. The name girasol is sometimes applied to an almost transparent opal, over the surface of which there travels, as the stone is moved about, a wave of blue light; the same term is, however, also applied to other precious stones. Opal-onyx is built up of alternate layers of celestial and of common opal.

The value of an opal depends first upon the brilliancy and beauty of its colouring and secondly upon the uniformity with which the play of colours is distributed over its surface. Those stones which show a brilliant play of colours over the whole surface are most valuable, while in inferior gems the colours are dull, and there are portions of the surface which show no play of colour. The substance of the stone is in itself colourless, its brilliant refulgence being due to changes effected in the incident rays of light during their passage through the opal. The drying up and solidification of the gelatinous silica of which an opal is chemically composed was attended by the development of a net-work of cracks and fissures; these cracks, by their action on the rays of light at their surfaces, give rise to a display of the rainbow colours characteristic of thin plates. Microscopical examination has demonstrated that these cracks are sometimes lined with a film of opal, the refractive index of which differs from that of the main mass. It has therefore been conjectured that the marvellous play of colour may be due in part to this, seeing that it is so much more brilliant and magnificent in this stone than in any other iridescent mineral. But it is possible that the opalescent phenomenon has not as yet been completely explained.

In almost all cases an opal is cut in a rounded form, for not only does the existence of facets detract from its colour, but owing to its softness the edges between the facets would very soon lose their sharpness. Opal is, therefore, rarely cut in facet form, though the table-cut and the step-cut are sometimes used.

By the employment of various devices the play of colours of an opal can be increased to a certain extent; thus, for example, a cut stone, which is not too thick and opaque, may be placed upon a variegated foil, a piece of peacock's feather, or a bright polished plate of mother-of-pearl. The stone is best set in a black case and surrounded by a border of small diamonds or of coloured transparent stones of some sort. In the same way the effect of a large diamond, ruby, or sapphire is greatly increased when set with a border of small opals.

Good opal commands a high price. Fine Hungarian stones are almost equal in value to brilliants of the same weight. Large opals, especially those with a considerable thickness on account of the relative rarity of their occurrence, are dear, and the price of still larger stones is more than proportionate to the increase in size. A carat stone showing a brilliant play of colour is worth at least fifty shillings.

In the middle ages celestial opal of fine quality was probably valued still more highly, for the stone was greatly admired by the Romans, who doubtless obtained their supplies from the mines of Hungary, mines which are still famous. In Egypt, Arabia and Cyprus, opals are also found; but since the beginning of this century some of the finest stones have come from Australia, both from Queensland and New South Wales. It was in 1900 that deposits of natural "black opals" were found in the White Cliffs region of New South Wales. Exceedingly beautiful are the opals that have come from these deposits, with wonderful flames of red, green and blue, on a black background. They command high prices.

* * * * *

Though the Moonstone can hardly be called a precious stone in the ordinary meaning of the phrase, it is certainly ornamental, and its beauty is so remarkable that a special word must be spoken in praise of it. Like the little known sun stone it is a feldspar; which, when cut *en cabochon* reflects a soft blue light that has been aptly compared to the rays of the moon. In the East it is regarded as a sacred stone, and one that invariably brings good fortune to its lawful possessor.

At one time it was thought that its lustre waxed and waned with the moon. The milky sheen is probably due to the presence of microscopically small, colourless and brilliant crystal

A CHRYSOPRASE PARURE

Consisting of a necklace,
brooch, and a pair of ear-rings.
The chrysoprases are mounted
in fine beaded gold-work set
with small rubies.

The property of Lady Cory.



plates embedded in great numbers in the substance of the stone, and arranged parallel to the surface from which the reflection of light takes place. A good moonstone is notable for its chatoyancy, that is to say, for its changing varying lustre, like watered silk or the eye of a cat in the dark, from which the term is derived.

Moonstone of an inferior quality comes from St. Gothard in the Alps, where it is found embedded in white kaolin clay. The Allen's Mica Mine in Virginia produces a good quality, but the finest specimens come from Ceylon, famous for its moonstones, a fame that was greatly increased in Victorian days by the novelist Wilkie Collins, whose thrilling romance, *The Moonstone*, is still well worth reading.

Sunstone is also a felspar, having a golden yellow or reddish reflection due to the presence of minute embedded and scattered crystals of haematite, gothite or mica. Sunstone of a green hue is also called the amazonstone, but the sunstone has never obtained the popularity of the pearly-white moonstone, which will always be a favourite for personal adornment, and which deserves an even greater popularity than is at present bestowed upon it.

* * * * *

There are two kinds of Cat's Eye, the occidental cat's eye, which is quartz, and the oriental cat's eye, which is chrysoberyl. This distinctive term being applied to both varieties often leads to confusion, but as a gem the quartz is of small value, while the chrysoberyl is a favourite for signet rings, and at times has been greatly the fashion. It is with the latter cat's eye or cymophane (a Greek word, meaning *wave of light*) we deal here. It is found in that island of gems, Ceylon, and though valued there as a charm against evil spirits, possesses a still higher value on the mainland, having from ancient times been eagerly sought after in India for setting with other stones.

Cat's eyes of finest quality are those in which the chatoyant band is of uniform width, not too broad and very sharply defined. Inferior stones are those in which the band is interrupted, is too wide, or possessed of ill-defined margins, so that it does not stand out in sharp contrast with the surrounding portions. Specimens in which the band is replaced by a patch of light are also considered to be of inferior quality. The stones most appreciated in Europe are those of a reddish-brown colour and with a delicate bluish-white sheen. In Ceylon the pure olive-green cat's eye, with a narrow, sharply defined band of light, is in highest favour. The stone is

always cut *en cabochon*. The white line across it should appear to move as the ring is turned in the light.

* * * * *

There is no precious stone which has secured higher or more well-merited popularity in recent years than the Peridot or noble olivine. Sir A. H. Church mentions that until quite recently the largest and finest peridots were found in old ecclesiastical and other jewellery. A store of fine peridot were dismantled from the foundations of a building in Alexandria, where it is supposed they were originally buried in order to secure good fortune for the house. Lately, however, one at least of the best original sources of this beautiful gem has been re-discovered in the island of St. John in the Red Sea; other islands in the same region are also now found to produce this stone.

The peridot is dichroic, its twin colours being brown yellow and sea-green. The leek green variety is sometimes called the evening emerald, and there are connoisseurs who prefer the delicacy of its hue to the true emerald.

The well-known green jewels which ornament the famous shrine of the Three Holy Kings in the Cathedral of Cologne are usually spoken of as emeralds, but they are, as a matter of fact, peridot, or chrysolites. These two words are both used to denote the same gem, which is also called the 'noble olivine,' a stone which most authorities are now agreed is the gem referred to in the Bible as the topaz. This stone appears to have been dedicated to the sun in early times, and from this association is probably derived its special virtue of being able to dissolve enchantments and to put evil spirits and the powers of darkness to flight. A vulture carved on a peridot had special influence in this adventure, and also was supposed to endue the wearer with the control of favourable breezes on a sea voyage.

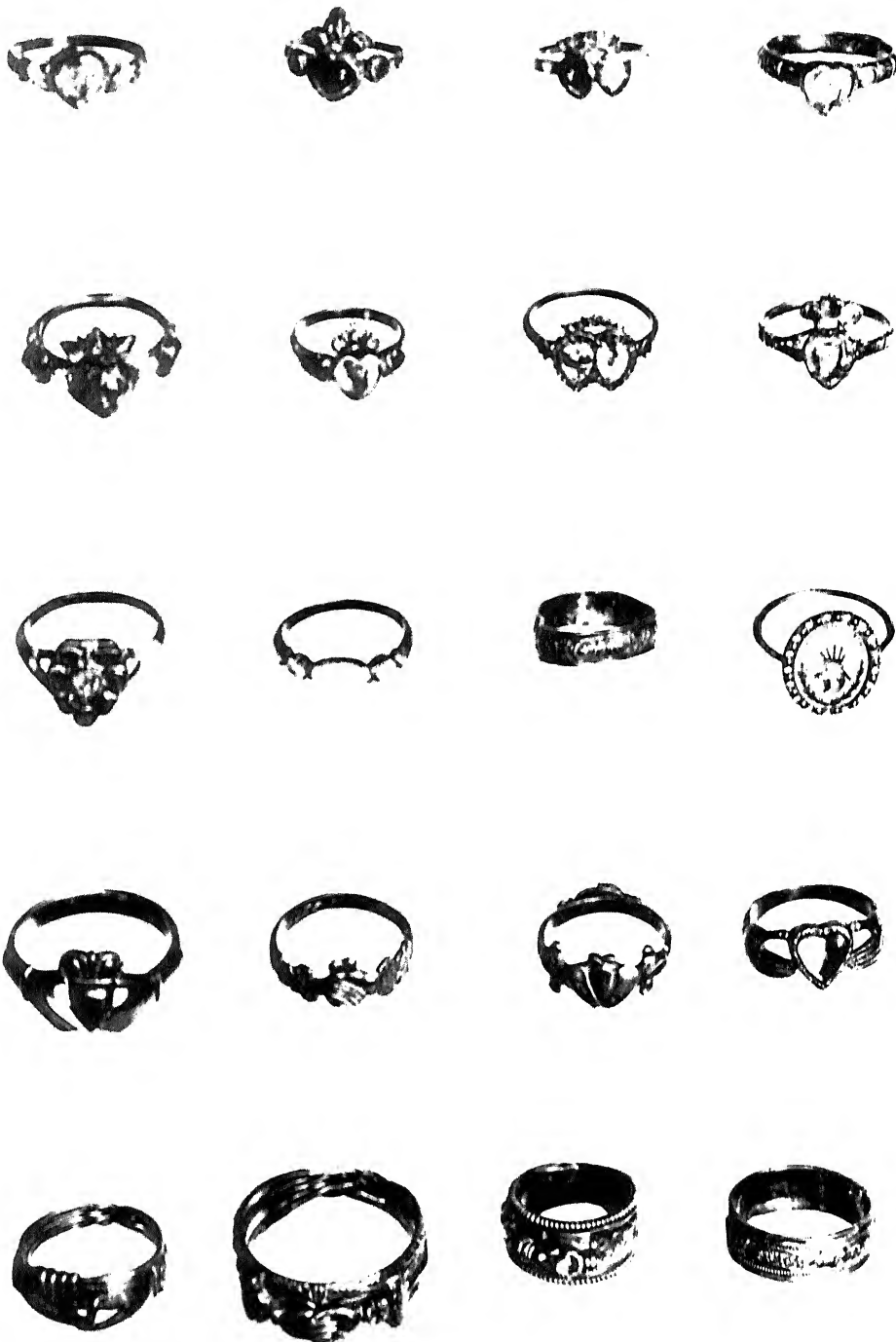
Peridot is a French name, with an uncertain origin. The earliest mention of the word is said to occur in the Wardrobe Book of Edward I. (A.D. 1300), where among the jewels of the Bishop of Bath and Wells escheated to the Crown, mention is made of *unus annulus aureus cum peridotis*.

Peridot being a comparatively soft stone lends itself to engraving. Its chemical composition is a silicate of magnesium, the colouring being due to ferrous oxide. The favourite colours are

LOVE RINGS

Conspicuous among these are *fede-rings*, which receive their name from the two hands clasped in troth, or holding a crowned heart. The heart, surmounted by a jewelled coronet, is often cut in a diamond and the two hands enamelled. Many of these are inscribed. Others are *gimmels*—made of two hoops fitting closely together and capable of division if required. These rings offer suggestions for the design of engagement rings of the present day.

The property of the British Museum.



leek green or yellowish green, the word peridot being sometimes technically applied to the former and chrysolite to the latter. But the names are interchangeable and both are olivines, a mineral, by the way, that is found in meteorites. When set in black and white, or in orange enamel and gold, there is no more beautiful pendant than a peridot.

* * * * *

We have seen that peculiar virtues are believed to be attached to certain precious stones, which, to the imaginative, make them welcome gifts. Then, too, there are names originating from jewels, such as Marguerite, Daisy, or Pearl, from the pearl, Ruby, from the ruby, and Emerald, from the emerald, which makes these jewels, as it were, the special property of women bearing these names. From ancient times, special jewels have been attached to special months, so that it is thought appropriate that man, woman or child born in that month should possess a trinket or seal encoring their natal gem.

There are many of these codes. The Jews invented one, the Romans another. In Russia and Italy there are other gem-codes for the months. Eiderus, Bishop of Seville, drew up a special list, and in the eighteenth century yet another was prepared. It is singular that in only three instances does the same gem signify the same month in each one of these codes, i.e., the amethyst for February, the beryl for October, and the topaz for November. The other differences are so great that a special gem for the month loses its symbolism if all the codes are read. We give here what is known as the "Polish code," the one generally followed in England and the United States :

January,	Garnet.	July,	Ruby.
February,	Amethyst.	August,	Sardonyx.
March,	Blood Stone.	September,	Sardonyx.
April,	Diamond.	October,	Beryl.
May,	Emerald.	November,	Topaz.
June,	Agate.	December,	Turquoise.

The glory and beauty of jewels are eternal, and the desire to possess them—even unmounted—often becomes the passion of a lifetime. Goethe symbolised the feminine love of gems when he made Gretchen fall before a casket of glittering brilliants and lustrous pearls. The lover—be he a Don Juan or a Sir Galahad—has never been slow to avail himself of their potent aid.

CHAPTER X

On Rings

*Wearers of rings and chains,
Pray do not take the pains
To set me right,
In vain my faintest poets,
I write as others write
On Sumner's height.* W. S. LAMOND.



INGS have always possessed an extraordinary interest, inasmuch as they are the symbols of betrothal and marriage, of ecclesiastical pomp and power, and of the sovereignty of Kings.

They are mentioned again and again in the Bible, and indeed play a large part in Oriental and Scandinavian legend. The golden ring of the Nibelungen, which lay on the bed of the Rhine, brought about the final Götterdämmerung, and fall of the ancient gods. In Egypt, the scarab ring, an emblem of the sun and of immortality, was worn as an amulet, and promised length of years to the wearer. The women folk often wore a ring engraved with the figure of the sacred cat. In story and legend, a ring presented to a friend was often the means of help being sent in time of danger or trouble. It represented a pledge, and when it was returned the donor knew what to do; thus, the famous sardonyx cameo, with a portrait of the Great Queen on it, presented by Elizabeth to the Earl of Essex as a pledge of succour in time of trouble, has one of the most tragic histories in the world. Enemies came between him and Elizabeth, and he was condemned to death. He endeavoured to send back the ring to his royal mistress, but Lady Nottingham intercepted the pledge and the unfortunate Essex went to the block. Elizabeth is supposed never to have recovered from the tragedy.

The toad-stone ring, worn in the Middle-Ages, was a prophylactic which protected young children and their mothers from evil ; soaked in water, the liquid was thought to be a cure for some diseases. Moreover these "toad-stones" are supposed to have perspired and changed colour when worn by a person who had been poisoned. The "toad" was simulated, being merely round pieces of light brown bone, set in a silver ring. The faint outline of a toad—which in the Middle-Ages enjoyed great prestige as a preventive of many dangers—was artificially produced. We know that rings were first worn, not to adorn the person, but as charms, talismans, or to test possible poison in dishes or drinks. They seem to have been regarded as a kind of primitive life-insurance. Thus the Turkey-stone or turquoise was highly esteemed, because it was supposed to turn pale when the wearer was not well. Shylock, we remember, declared he would not lose his turquoise ring "for a wilderness of monkeys."

Many mediæval rings had cabalistic names and strange, unintelligible words engraved on them, which enhanced their value and potency. The most popular (and efficacious) inscription on a mediæval ring was that of the names of the Three Kings of the East, a powerful charm against peril by travel or sudden death.

The Roman Patricians were great lovers of rings, probably because they were proofs of good birth and family, for no slaves or freed-men might wear such things if fashioned in gold. Moreover, in the reign of the later Emperors the wearer of a golden ring had not only to be of patrician birth, but to possess property of at least four thousand pounds of modern money. It is an idea that might be taken up by harassed Chancellors of the Exchequer. We are told that the slaves and freed-men circumvented this sumptuary law by covering up their silver and iron rings with gold foil. Roman rings were often made in the shape of snakes, or reptiles with the head of an Egyptian deity.

With the dawn of the Renaissance the ring became an object of adornment rather than a talisman or sign. They were abundantly worn, Henry VIII. of England possessing no less than two hundred and thirty four. Rings not only covered every finger of the hand, including the thumb, but were so bulky that the gloves had to be split—as may be seen in portraits painted at the time—so that the jewels should be visible to the casual spectator. They were also worn sewn to a man's hat, and even hung on a thin cord round his neck ; in the latter case they were usually betrothal rings. The gimmel, or

double ring, was much favoured for this purpose, and they were often embellished with two carved clasped hands. Jewish wedding rings of the Renaissance period are enriched with beautiful enamels, and have as ornaments the model of a building with gabled roofs and enamelled tiles, pierced by windows, and having movable weather-cocks, with an inscription in Hebrew with the motto "Good Star." These rings were only used at the ceremony in the synagogue and were afterwards preserved by the family.

A lurid romance hangs about the celebrated poison rings of the Renaissance. In those turbulent and tragic times it was possible for a host to press his guest's hand, and the guest would be a dead man within a brief space. Cæsar Borgia's poison-ring still exists, having a tiny sliding panel, the small hollow behind being the receptacle for a deadly poison. Such strange pieces of jewellery were known to the earlier Romans, the Emperor Heliogabalus for instance, wearing a poison-ring habitually, though intended for his own use in case of untoward happenings.

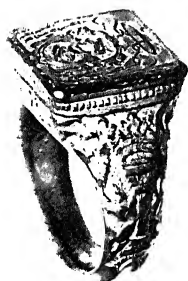
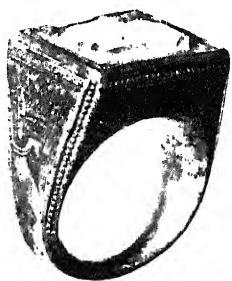
The symbolic rings of Kings and Queens, made to wear only at their coronation, are in some cases expanding ones, so that they can fit any royal finger, fat or lean. The ring of Charles I., consisting of a flat ruby, on which is engraved a St. George's Cross, the whole set round with diamonds, is a case in point. This ring is not used at royal coronations, and is kept at Edinburgh. The Military Orders, such as the Knights Templars and the Knights of St. John, had their own rings. A sinister military ring was the thumb-ring, cut out of jade and set with rubies and gold wire, which was used to shield the fingers in archery. It also served as a lever for the bow-string when it was used for strangling condemned persons.

Since earliest times the ring has been a special mark of honour, and in mediaeval days they were used in the Church to signify the rank of the wearer. To this day a French Bishop wears that "anneau d'amethyste," which Anatole France has immortalised in a novel of modern French manners. The great princes of the Roman Church display official rings of purple or blue stones.

The mourning-ring used to have a great vogue up to middle Victorian times, and the sum of £100 "to buy a ring" was often left to friends by will. In those of the seventeenth century there is the gruesome design of a small enamelled skull, or sometimes the bezel was of crystal in the shape of a coffin, the lid of which being opened reveals a coffin. Rings of this kind were given at funerals in the seven-

PAPAL RINGS

Massive rings, usually of gilt copper or bronze, with the arms of popes and cardinals. Probably employed as emblems of investiture or as credentials; and intended to be worn over the glove. These rings are remarkable for their extraordinary size.



teenth century, at that of Samuel Pepys more than a hundred and thirty rings were given to friends and relatives, a piece of ostentation which would have mightily pleased the immortal diarist. The eighteenth century was in some respects incurably sentimental, so that the hair of the deceased became the material in which to work. Sometimes a funeral urn, and even a picture is depicted with human hair, aided by fine miniature painting. Later on, the initials of the deceased were added and a date engraved on the ring.

Of a more cheerful character are engagement-rings, especially those of the "posy" variety. These have somewhat artless inscriptions, such as "The love is true that I O U," or "Let us love like turtle dove," and others more cunning display the same laudable sentiments disguised in different stones. Thus "love me" may be spelled out by the ingenious in a ring set consecutively with lapis lazuli, opal, verde antique, emerald, marcasite and emerald. Such a "posy" would possess more emotional than aesthetic attractiveness.

The posy ring was at one time a great favourite, and its charming symbolism is by no means out of fashion. In the fourteenth and fifteenth century the posy, or poesy ring, contained a motto, line or sentiment engraved on the outside; but lovers, later on, deemed it more fitting for the words to be cut inside the circle. In the great play-acting scene of *Hamlet*, the Prince remarks: "Is this a prologue or the posy of a ring?" Many of these posies were delightfully quaint and apposite both in character and sentiment, and they had of necessity to be brief. Somewhat similar in idea are rings set with different gems, which, either by the initial letter of each form an anagram, or by the inner significance of the stone convey a wish or thought. Special gems are associated with special virtues, months, names and stars. As a simple illustration of the anagram ring it is obvious that the four gems, hyacinth, opal, pearl and emerald would signify hope to the lucky recipient.

Towards the end of the seventeenth century it was in high fashion to have a ring with a bezel formed like a nosegay, a basket of flowers, or a vase containing blossoms. These were formed either of coloured gems or in enamel, and sometimes a "posy" was engraved inside, such as "Difficulty sweetens enjoyment." Such a posy ring was used in betrothal or marriage, and was exclusively English.

With the middle and late eighteenth century comes the vogue of the marquise ring with its large octagonal of blue glass on matted gold, surrounded with diamonds and set with a single diamond or

paste. From that period too, date the charming Wedgwood cameo rings, generally surrounded with small pearls. The ring had now become a somewhat large and showy ornament. In the present century there has been a revival in the simpler and more beautiful forms of rings, and their popularity in all classes and all periods of life has never been greater.